UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

OCT 19 2009

Ms. Charlene Drake
Director of Operations
React Environmental Professional Services Group, Inc.
P.O. Box 5377
6901 Kingsessing Ave, Suite 201
Philadelphia, PA 19123

Re: React PCB Self-Implementing Plan for Lot I, Subsections A - D at the Former Schmidt's Brewery, Cleanup Tracking No. 2009-61-014

Dear Ms. Drake:

This letter is in response to React Environmental Professional Services Group, Inc. ("React") notification and certification, dated September 25, 2009 and updated October 9, provided to the U.S. Environmental Protection Agency Region III (EPA) pursuant to the requirements of the *Self-implementing on-site cleanup and disposal of PCB remediation waste* regulation, 40 C.F.R. § 761.61(a). This notification and certification was received by EPA on September 29, 2009 and October 13, 2009, and was submitted by you regarding React's plan to cleanup and dispose of polychlorinated biphenyl (PCB) waste located at the Former Schmidt's Brewery site ("Schmidt's" or "Site") located at 2nd and Girard Streets in Philadelphia, Pennsylvania.

EPA has reviewed React's cleanup plan for the Schmidt's site and finds that it is consistent with the requirements of 40 C.F.R. § 761.61(a). EPA hereby approves the PCB cleanup plan for the Schmidt's site submitted with React's notification and certification, dated July 2, 2009. This approval is subject to the conditions and limitations set forth in 40 C.F.R. § 761.61(a). The approved plan may be modified only in accordance with the procedures described at 40 C.F.R. § 761.61(a)(3)(ii).

This approval is only for Lot I, Subsections A - D, and, as such, only grants approval for remediation of soils on Lot I.

EPA's approval of React's plan does not in any way constitute a finding by EPA that the Schmidt's site will be safe or appropriate for any future use, does not insulate the owner or occupant of the property from action under any applicable law, and does not relieve React, or any other owner or operator of the Schmidt's site of its continuing responsibility to comply fully with 40 C.F.R. Part 761. EPA emphasizes that these regulations include several conditions and limitations that apply to persons performing a PCB cleanup activity subject to 40 C.F.R. § 761.61(a). Among other things,

the regulations state that "[c]omplete compliance with 40 C.F.R. § 761.61 does not create a presumption against enforcement action for penalties for any unauthorized PCB disposal." 40 C.F.R. § 761.50(b)(3)(ii)(B). Further, "[a]ny person storing or disposing of PCBs is also responsible for determining and complying with all other applicable Federal, state, and local laws and regulations." 40 C.F.R. § 761.50(a)(6).

EPA is requesting that a brief summary of the completed cleanup activities, including but not limited to: characterization and confirmation sampling analytical results; copies of the accompanying analytical chains of custody; field and laboratory quality control/quality assurance checks; copies of manifests; copies of certificates of disposal or similar certifications issued by the disposer; copies of the deed restrictions; and, total amounts of PCB waste disposed, be submitted within ninety (90) days of completion to:

Kyle J. Chelius
U.S. Environmental Protection Agency
Region III (3LC61)
Land and Chemicals Division
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

Any questions concerning this approval or the self-implementing site cleanup plan review should be directed to Kyle J. Chelius at (215) 814-3178.

Sincerely,

Abraham Ferdas, Director
Land and Chemicals Division

cc: David Crownover, PADEP

REPSG
React Environmental
Professional Services Group, Inc.

SELF IMPLEMENTING ON-SITE CLEANUP AND DISPOSAL PLAN

FORMER SCHMIDT'S BREWERY
Bounded by N. 2nd St., Girard Ave., Hancock St., Wildey St., Germantown Ave.
City of Philadelphia
Philadelphia County, Pennsylvania

September 25, 2009

REPSG Project Reference No. 6651.130.03

PREPARED FOR:

Northern Liberties Development, LP
969 North Second Street
Philadelphia, PA 19123

This plan represents REPSG's knowledge of conditions on the Former Schmidt's Brewery at the time of preparation.

PREPARED BY:

Adam C. Rose
Environmental Risk Analyst

REVIEWED BY:

Charlene Drake
Director of Operations

P.O. Box 5377
6901 Kingsessing Avenue, Suite 201
Philadelphia, PA 19142-0377

215 729.3220
215 729.1557 (Fax)
www.repsg.com

TABLE OF CONTENTS

TABLE OF CONTENTS

LIST OF REPORT TABLES

APPENDICES

LIST OF REPORT TABLES

APPENDICES

1.0 INTRODUCTION

1.1 PURPOSE AND SCOPE

The purpose of this Self-Implementing Onsite Cleanup and Disposal Plan (Report) is to provide the United States Environmental Protection Agency (EPA) Region 3 Toxic Substances and Control Act (TSCA) program with the information necessary to review and approve proposed activities in support of Subsections A – D (see **Figure 3**) on the "Second Phase" of development on the Former Schmidt's Brewery Site ("Site"). As will be discussed further, this initial Report is intended to cover remediation activities to allow the construction of commercial space and parking areas on a portion of the Site. The proposed end use constitutes the final plan of development for this portion of the site. This work will involve handling of debris, if encountered, and TSCA regulated polychlorinated biphenyls (PCB) containing soils. The Report includes information on the source of the PCB contamination, nature and extent of the PCB impacts, and remediation plans.

There have been three (3) Self-Implementing Cleanup Plans that have been previously submitted and approved for different portions of the Site. The first Self-Implementing Cleanup Plan covered the First Phase of the development. This was originally submitted on February 17, 2009; a revised cleanup plan and a comment and response document dated February 25, 2009 were submitted to EPA, and approval was granted in an EPA letter dated February 27, 2009. The second Self-Implementing Cleanup Plan that was submitted and approved was dated June 19, 2009. This cleanup plan was drafted with the sole purpose of obtaining clearance to allow the construction of caissons in the low occupancy future use (as defined in 40 CFR 761.3) portions of the Second Phase of development. In a letter from the EPA this cleanup plan was approved on July 1, 2009. The third Self-Implementing Cleanup Plan that has been submitted and approved for this site was submitted to the EPA on July 9, 2009 and approved in a letter from the EPA on July 30, 2009. This third cleanup plan covered the remediation of Subsections E – J of the Second Phase of development at the Site.

As described above this Self-Implementing Cleanup Plan is designed to cover Subsections A – D of the Second Phase of development. This cleanup plan is designed to be the final cleanup plan submitted for this Site.

1.2 BACKGROUND

This Site is bounded by Girard Avenue to the north, Hancock Street to the northeast, Wildey Street to the southeast, Germantown Avenue to the southwest, and North 2nd Street to the west in the Northern Liberties neighborhood of Philadelphia, Pennsylvania and is the location of the former Schmidt's Brewery. The former Schmidt's Brewery is situated on 9.4 acres. Northern Liberties Development, LP ("NLD") acquired the property via Sheriff's sale on February 2, 2000. Prior to NLD's acquisition of the property, transformers associated with the former Schmidt's operations were reportedly removed from the Site. From 2000-2001, NLD undertook remediation and demolition of the vacant and abandoned buildings. The investigation and remediation was performed under the oversight of the Pennsylvania Department of Environmental Protection (PADEP) Land Recycling Program (LRP) established by the Pennsylvania Land Recycling and Environmental Remediation Standards Act ("Act 2"). The results of

this investigation and remediation were summarized in the Combined Remedial Investigation Report and Cleanup Plan (Act 2 Combined Report) submitted to the PADEP on January 31, 2008 (which describes investigation and remediation of PCBs as well as other compounds of concern). In a May 7, 2008 letter, PADEP concurred with the findings in the Act 2 Combined Report that soils impacted by PCBs have attained Pennsylvania's Statewide Health Standards for residential exposure.

Since the approval of the Act 2 Combined Report REPSG has continued an investigation in accordance with the TSCA program. This Report presents the information necessary, based on the TSCA framework in 40 C.F.R. Part 761, to review and approve proposed activities in support of the "Second Phase" of development on the Site. The Site is currently vacant and former above grade structures have been demolished.

1.3 Report Organization

Organization of this report is as follows:

- **Section 1** provides an introduction to the Site and the scope and objective of this reporting.
- **Section 2** provides Site description and history of ownership and prior environmental investigations.
- **Section 3** details the recent sampling and analysis completed under the TSCA program.
- **Section 4** provides an assessment of the distribution of identified PCB impacts at the Site.
- **Section 5** presents the cleanup plan, including excavation plans and engineering control descriptions.
- **Section 6** presents the remediation schedule.

2.0 SITE DESCRIPTION

2.1 Site Description

Information presented in this section has been developed from a review of prior environmental reporting, visual site reconnaissance, and research of Federal, State and local records.

2.1.1 Site Location

The Site is located at the corner of North 2nd Street and Girard Avenue. It is bounded by Girard Avenue to the north, Hancock Street to the northeast, Wildey Street and former Chenango Street to the southeast, Germantown Avenue to the southwest, and North 2nd Street to the west.

The Site has been divided into three lots and encompasses a total of 9.4 acres. Lot I is the northern 3.30-acre portion of the Site, and will include low-occupancy and high-occupancy development. Lot II is the central 5.43-acre portion of the Site and Lot III is the southern 0.90-acre portion of the Site. Geographic coordinates of the Site, referencing the southeast corner of the intersection of North 2nd Street and Girard

Avenue, are 242544 N, 2699747 E (NAD 83 Pennsylvania State Plane, South Zone, US Feet) / 39.9693291 N. Latitude, 75.1395516 W. Longitude. Site location is shown on the attached **Topographic Map (Appendix A)**.

Lots II and III were covered under the February 17, 2009 Cleanup Plan as approved by the EPA (see **Figure 1**). Lot I has been sub-divided into ten (10) subsections labeled A – J for the purposes of this reporting (see **Figure 3**). Subsections A – D, which include both low-occupancy and high-occupancy development, are the subject of this plan.

2.1.2 Current Site Development and Usage

The Site is currently vacant. All historical on-site structures have been demolished. On-site access is restricted by chain-link fence along the perimeter of the entire Site. The buildings in the vicinity of the Site are comprised of a mixture of residential and commercial/light industrial properties. The area is zoned Area Shopping Center (ASC) as defined in the Philadelphia Zoning Code. Site boundaries and the boundaries between the three phases of development are shown in **Figure 1** included in **Appendix A**.

2.1.3 Proposed Site Redevelopment and Usage

NLD proposes mixed use for the Site, as depicted in **Figure 1**. This development is subject to slight changes in the construction process, however the plan approval has been granted, and is unlikely to undergo significant change relative to the building footprints and land usage. The development will occur in phases, as previously stated this Report covers specific subsections of the Second Phase of the development. The Second Phase of the development includes the following elements, which will be constructed on Lot I of the Site:

Lot I

- A commercial building will be constructed along North 2nd Street and along Girard Avenue. This commercial building will include ground floor retail/commercial units, and a single commercial unit (a supermarket) located above these commercial units at the corner of the intersection between North 2nd Street and Girard Avenue.

- The interior portion of the Lot I development at the Site will be developed with a two-story parking field, above a portion of which will extend the second-story supermarket in the adjacent commercial building.

2.2 Site Ownership and Operational History

The former Schmidt's Brewery was constructed in the 1890's and operated from the turn of the century to the late 1980s. During its operation, the brewery expanded to occupy the area within Hancock Street, Wildey Street, Germantown Avenue and North 2nd Street, by constructing several buildings and parking lots over previous residential and commercial properties. Locations of former structures are provided in the Project Summary Report submitted to the EPA on July 29, 2008. The complete July 29, 2008 report was previously supplied to the EPA as Appendix I of the February 17, 2009 Cleanup Plan.

REPSG conducted a search of city records to identify the chain of ownership for the former Schmidt's Brewery. Because the Site as a whole historically consisted of approximately 170 separate tax parcels, assembling the chain of title for every parcel was considered impractical. The following table, **Table 1**, lists the grantors, grantees and dates of title transfer of some of the former operational portion of the brewery, known as Parcel 8-N-11 Lot 23 with an address of 160-186 Girard Avenue, and consisting of approximately 4.89 acres:

Table 1: Chain of Ownership, Parcel 8-N-11 Lot 23, 160-186 Girard Avenue

Grantor	Grantee	Date
Charles Voss	George Weldmann	8/15/1866
George Weldmann	Frederick Anti	3/26/1879
The Heirs to the Estate of Frederick Anti	Henry C. Schmidt, Edward A. Schmidt, and Frederick Schmidt	3/2/1896
Henry C. Schmidt, Edward A. Schmidt, and Frederick Schmidt	Albert A. Starck	3/19/1896
Albert A. Starck	George A. Webber	12/21/1909
George A. Webber	Katherine Starck	12/21/1909
Albert A. and Catherine Starck	Robert Noble	9/28/1911
Robert Noble	C. Schmidt and Sons, Inc.	9/28/1911
Sheriff's Deed, C. Schmidt and Sons, Inc.	Northern Liberties Development, LP	2/4/2000

The former Schmidt's Brewery has been abandoned since cessation of operations (exact date unknown). NLD acquired the Site through a Sheriff's sale in February 2000. The vacant and abandoned on-site structures were demolished and certain remediation activities were conducted by NLD from 2000-2007.

NLD conducted removal activities of hazardous or potentially-hazardous materials, which are understood to have existed on the Site before NLD's ownership, prior to and during demolition work.[1]

Removal of materials, including asbestos, was performed by a third-party contractor under oversight by the City of Philadelphia's Public Health Department's Air Management Services, Asbestos Control Unit. Disposal included four (4) PCB drums and 1 capacitor pack by a hazardous material crew. All of these materials and all other materials that were exported off site were disposed of in accordance with all applicable regulations. Documentation of PCB-related disposal is provided in the Project Summary Report submitted to the EPA on July 29, 2008. The complete July 29, 2008 report was previously supplied to the EPA as Appendix I of the February 17, 2009 Cleanup Plan.

2.3 Summary of Prior Investigations

2.3.1 Project Summary Report

A Project Summary Report dated July 29, 2008 was submitted to the EPA. This report provided a summary of the site investigation work relative to PCB impacts at the Site. The Project Summary Report

[1] ePhase, Inc. Draft Limited Phase I Environmental Site Assessment, Former Schmidt's Brewery, 160-186 Girard Avenue, Philadelphia, PA. August 17, 1999.

presented the investigation according to Area of Concern (AOC). The AOCs included specific locations where PCB impacts were likely to be present based on former Site use, and a Site-wide investigation to assess the potential for any addition areas with PCB impacted soil. The list of AOCs which were investigated for PCBs is presented in **Table 2**; their locations are depicted in **Figure 2** included in **Appendix A**.

Table 2: AOC List

AOC Name	*AOC Location*	*AOC Description*
AOC-002	**Lot I**	A former transformer room located at the ground floor of former Building #21.
AOC-003	**Lot I**	A former transformer room located at the ground floor of former Building #11
AOC-004A	**Lot I**	A former sub-surface vault located southwest of former Building #11
AOC-004B	**Lot I**	A former sub-surface vault located at the loading dock between former Buildings #24 and #12.
AOC-007	**Lots I, II, and III**	Site-wide soil quality

PCBs were initially evaluated for individual Aroclors in accordance with the PADEP Land Recycling Program (LRP) regulations (25 Pa. Code Ch. 250). PCB impacts to soil were identified at all five of these AOCs, and required remediation to attain residential statewide health standards (SWHS) in accordance with Sections 250.703 and 250.707 of the LRP regulations. These remediation activities included the excavation and disposal of soils and post-excavation sampling to confirm the removal of impacted soils. PCBs were not identified in groundwater.[2]

3.0 TSCA INVESTIGATION

US EPA oversight was initiated by NLD in July 2008. Investigation in July of 2008 included grid soil sampling, and groundwater sampling at the Former Schmidt's Brewery Site. The objective of these investigations was to delineate specific areas of PCB impacted soil, provide additional coverage, and confirm the absence of PCBs in groundwater. The soil investigations had a particular emphasis in identifying areas which exceed specific high-occupancy action levels (1 and 10 ppm) and low-occupancy action levels (25 and 100 ppm). Groundwater sampling confirmed that groundwater is not impacted with PCBs.

3.1 Hand Auger Procedure

Hand Auger samples were collected at various locations across the Site. This instrument is frequently used for the collection of shallow soil samples. All soil samples are collected under the oversight of a REPSG geologist. Hand auger samples are collected by first clearing the surface of any debris, and advancing the auger, manually, down to the desired depth for sampling. Upon extraction of the auger

[2] Both soil and groundwater samples were analyzed for the presence of PCBs by EPA Method 8082. Later, on October 3, 2008, as per the request of the EPA, the groundwater was tested for total PCBs via EPA Method 680, which is the preferred analytical method. These results did not identify any total PCBs at concentrations above the applicable MSC.

approximately 50 cm^3 of soils were removed and transferred by an REPSG geologist, wearing new surgical gloves, into a 4 oz. jar.

3.2 Geoprobe® Drilling Procedure

Geoprobe® borings were advanced in at different locations across the Site and were advanced to different depths. All borings were advanced under the oversight of a REPSG geologist. Borings were advanced using a truck mounted Geoprobe® drilling rig, which collects soil samples by using direct push technology. A 2" diameter acetate sleeve was inserted into a 4' long stainless steel core. The core was pushed in the ground, and the soil was collected within the acetate sleeve. The sleeves were then retrieved, cut open, logged, and samples were collected. Four (4) foot and five (5) foot sleeve lengths were used by the two companies that were employed to advance the borings. These two companies include B.L. Myers Brothers and Co. of Glenmoore, PA and Environmental Probing, Inc. (EPI) of Cream Ridge, NJ. All drillers were licensed in the Commonwealth of Pennsylvania.

3.3 Soil Sampling Procedure

3.3.1 Grab Soil Samples

All samples from the assessment are collected *in-situ*. Continuous soil cores are obtained from each of the soil borings that are advanced via the Geoprobe® rig, as described above. Soil cores are examined by the on-site scientist. REPSG's on-site scientists characterize soil using visual and olfactory observations, as well as a portable photoionization detector (PID) equipped with a 10.6eV lamp, capable of detecting organic vapors. REPSG's on-site scientists note any PID readings, which are measured at six inch intervals along the soil borings, any evidence of contamination, and the depth to groundwater.

Soil samples collected using a hand auger procedure are examined by REPSG's on-site scientist, this examination includes visual and olfactory observations, as well as the screening of soils using a PID. REPSG's on-site scientists make note of any PID readings or any evidence of contamination.

Clean, disposable, nitrile gloves are worn during all sampling collection activities. As per REPSG's Standard Operating Procedures, provided in **Appendix C**, approximately 50 cm^3 of soils are collected for each sample. These samples are packaged into 4 oz. jars, tightly sealed and clearly labeled with the sample identification number, project name, and date and time of sample collection. After a sample is collected, it is placed immediately in an insulated cooler with ice to maintain a temperature of approximately 4 degrees Celsius. Each sample is entered on a chain of custody form that is maintained with the samples and transported to Analytical Laboratory Services, Inc. (ALSI) a NELAP accredited laboratory based in Middletown, PA, where these soil samples are analyzed for total PCBs via EPA Method 8082. In accordance with US EPA standards[3] Quality Assurance/Quality Control (QA/QC) samples are also collected and submitted along with the primary samples for analysis. These EPA approved QA/QC samples included duplicated samples collected at a 5% frequency.

[3] Standard Operating Procedure for Polychlorinated Biphenyls (PCBs) Field Testing for Soil and Sediment Samples, Office of Environmental Measurements and Evaluation, EPA Region New England, April 17, 2002.

3.3.2 Compositing Samples

Soil sample compositing is done in accordance with 40 CFR 761.289. The compositing of soil samples is only a valid method for cleanup verification samples, and is not appropriate for characterization samples.

3.4 Investigation Derived Waste

Decontamination activities for the non-disposable equipment were performed in accordance with 40 CFR 761.61(a)(5) and 40 CFR 761.79. Disposal of the used Geoprobe® sleeves were performed in accordance with 40 CFR 761.61(a)(5).

4.0 CONTAMINANT DISTRIBUTION

Analytical data collected from previous investigations was used to create a preliminary conceptual model of the soil conditions at the Site. Analytical data from previous investigations cover a period of roughly six years, from 2002 through 2007, and includes 70 remaining *in-situ* soil samples in Subsections A – D on Lot 1. The locations of these soil samples and the analytical results for these samples are included in **Appendix A** and **Appendix B,** respectively.

Using the existing analytical data, REPSG performed additional sampling efforts to fill data gaps in order to delineate the vertical and horizontal extent of PCB contamination and complete the Site characterization. The need for a thorough delineation program of PCB impacted soils present at a depth greater than 15fbg is particularly important, because worker health risks and access concerns make collecting cleanup verification samples impossible after the soils have been excavated in these deep excavations. The human health concern is associated with the dangers of placing a worker in an excavation deeper than 15 feet, and the access to the sidewalls of the excavation will be obstructed due to the placement of shoring boxes that are used to advance the excavation to this depth. For these two reasons these deep excavations will need complete delineation prior to the excavation to confirm the limits of the excavation without endangering the safety of any on-site laborers that might otherwise need to enter the excavation.

As previously described in **Section 3.0**, the additional sampling efforts to delineate the vertical and horizontal extent of PCB contamination and complete the Site characterization were initiated in July 2008, and, as of August 31, 2009, this additional characterization has included the collection of 504 samples, for a total of 570 soil samples analyzed for total PCBs collected in Subsections A – D on Lot 1. The locations of these soil samples and the analytical results for these samples are included in figures presented in **Appendix A** and analytical summary tables included in **Appendix B,** respectively. In addition to the 570 samples collected on Lot 1 between July 2008 and August 31, 2009, 50 samples were collected on September 14, 2009 in Subsection C to provide thorough delineation of the deep excavation in this portion of the Site. The results of the samples collected on September 14, 2009 were not available at the time of reporting. REPSG will evaluate this data, continue to sample in this area until complete delineation, designed in accordance with 40 CFR 761.61(a)(6), of the PCB impacts are determined, and will remediate any areas that have PCBs impacts in exceedance of the applicable regulatory standard. The locations of these 50 samples are presented in **Figure 3**. The analytical results and the remediation results

for these 50 samples will be presented in the project summary report to be prepared following implementation of an EPA approved Cleanup Plan.

The distribution of PCB impacts across Subsections A – D of Lot I was evaluated using all historical and recently collected analytical data up until August 31, 2009. This includes analytical data from 570 soil samples. Out of these 570 samples, 498 were collected in areas that will be developed with high occupancy features (ground floor commercial or support buildings), and 72 were collected in areas that will be developed with low occupancy areas (ground floor parking area or outdoor paved walk way).

The following PCB cleanup goals are proposed for low-occupancy and high-occupancy use areas covered in the Second Phase of the Former Schmidt's Brewery Site.

- Low-occupancy use area: Total PCBs in soil not to exceed 25 ppm. This is the cleanup level for bulk PCB remediation waste in low occupancy areas as specified in 40 CFR 761.61(a)(4)(i)(B). This area will be covered with a TSCA cap, which meets the requirements specified in 40 CFR 761.61(a)(7) and 40 CFR 761.61(a)(8).

- High-occupancy use area: Total PCBs in soil not to exceed 10 ppm. This is the cleanup level for bulk PCB remediation waste in high occupancy areas that shall be covered with a cap as specified in 40 CFR 761.61(a)(4)(i)(A). The capping materials will meet the requirements specified in 40 CFR 761.61(a)(7) and 40 CFR 761.61(a)(8).

In the interest of presenting the data in clear and legible mapping, Lot I was divided into ten (10) subsections, labeled Subsection A – J, and are depicted in **Figure 4,** included in **Appendix A**. Future maps will depict only a single subsection of Lot I within a given map, the subsection will be clearly noted in the map title or key. This Plan covers Subsections A – D only.

4.1 PCB Soil Analytical Results – Subsection A

During the initial characterization and delineation sampling events there have been 54 samples collected in Subsection A, the boundaries of which are depicted in **Figure 4**. Out of these 54 samples, 19 of these have total PCB concentrations above the applicable regulatory standard. A summary of the soil samples that have total PCB concentrations below or equal to the applicable regulatory standard, and a summary of the soil samples that have total PCB concentrations above the applicable regulatory standard are presented in **Table 3** and **4**, respectively.

Table 3: Analytical Results Summary for Sample Concentrations Less than or Equal to Applicable Regulatory Standard – Lot I; Subsection A

Sample Date	Sample ID	Sample Depth Range (fbg)	Proposed Development (Applicable Standard (mg/kg))	Total PCB Concentration (mg/kg)
09/02/2005	EP-135	8-8.5	High Occupancy (10)	3.75
07/24/2008	EG-001	8-8.5	High Occupancy (10)	4.51
07/24/2008	EG-002	11-11.5	High Occupancy (10)	3.24
07/24/2008	EG-005	6-6.5	High Occupancy (10)	3.59
07/24/2008	EG-007	12-12.5	High Occupancy (10)	1.23
07/24/2008	EG-008	3-3.5	High Occupancy (10)	4.06
07/24/2008	EG-010	9-9.5	High Occupancy (10)	7.98
07/24/2008	EG-011	2-2.5	High Occupancy (10)	9.96
07/24/2008	EG-026	11-11.5	High Occupancy (10)	7.93
07/24/2008	EP-137	6-6.5	High Occupancy (10)	6.16
07/24/2008	EP-140	8-8.5	High Occupancy (10)	5
07/25/2008	EG-003	6-6.5	High Occupancy (10)	3.63
07/25/2008	EG-006	3-3.5	High Occupancy (10)	<0.036
07/25/2008	EG-009	4-4.5	High Occupancy (10)	4.81
07/25/2008	EG-013	4-4.5	High Occupancy (10)	1.33
07/25/2008	EG-014	2-2.5	High Occupancy (10)	1.6
07/25/2008	EG-017	4-4.5	High Occupancy (10)	6.81
07/25/2008	EG-020	4-4.5	High Occupancy (10)	5.68
07/25/2008	EG-021	9-9.5	High Occupancy (10)	0.874
07/25/2008	EG-027	9-9.5	High Occupancy (10)	4.72
07/25/2008	EP-137	8-8.5	High Occupancy (10)	7
07/25/2008	EP-140	6-6.5	High Occupancy (10)	3.56
10/14/2008	AOC2-006	14-14.5	High Occupancy (10)	<0.5D
10/14/2008	AOC2-PE-033	8.5-9	High Occupancy (10)	6.8
10/14/2008	AOC2-PE-036	12-12.5	High Occupancy (10)	0.075
10/14/2008	AOC2-PE-037	12-12.5	High Occupancy (10)	0.77
10/14/2008	AOC2-PE-039	6-6.5	High Occupancy (10)	7.3
10/14/2008	AOC2-PE-042	12-12.5	High Occupancy (10)	6.2
10/14/2008	AOC2-PE-043	12-12.5	High Occupancy (10)	0.1
10/14/2008	AOC2-PE-044	12-12.5	High Occupancy (10)	0.085
10/14/2008	AOC2-PE-045	12-12.5	High Occupancy (10)	0.66
10/14/2008	AOC2-PE-046	12-12.5	High Occupancy (10)	<0.15
10/14/2008	AOC2-PE-061	9-9.5	High Occupancy (10)	9.5
10/14/2008	TP-010	14-14.5	High Occupancy (10)	ND
10/14/2008	TP-010	19-19.5	High Occupancy (10)	0.35

QUALIFIERS: < = Indicates that the reported concentration is the Method Detection Limit (MDL). ND = Sample Not Detected above the Laboratory Minimum Detection Limit (MDL). D = Compound identified at a secondary dilution factor.

Table 4: Analytical Results Summary for Sample Concentrations Greater than Applicable Regulatory Standard – Lot I; Subsection A

Sample Date	Sample ID	Sample Depth Range (fbg)	Proposed Development (Applicable Standard (mg/kg))	Total PCB Concentration (mg/kg)
09/02/2005	B-048	0.5-1	High Occupancy (10)	16.2
04/24/2007	AOC2-PE-041	6-6.5	High Occupancy (10)	13.8
07/24/2008	EG-004	2-2.5	High Occupancy (10)	13
07/25/2008	EG-012	5-5.5	High Occupancy (10)	42.5
07/25/2008	EG-018	4-4.5	High Occupancy (10)	18.3
07/25/2008	EG-019	5-5.5	High Occupancy (10)	12.5
10/14/2008	EP-136	6-6.5	High Occupancy (10)	10.7
10/14/2008	EP-136	8-8.5	High Occupancy (10)	28.5
10/14/2008	EP-136	10-10.5	High Occupancy (10)	37.5
10/14/2008	EP-138	6-6.5	High Occupancy (10)	24
10/14/2008	EP-138	8-8.5	High Occupancy (10)	21.8
10/14/2008	EP-138	10-10.5	High Occupancy (10)	51.7
10/14/2008	EP-139	6-6.5	High Occupancy (10)	351
10/14/2008	EP-139	8-8.5	High Occupancy (10)	12.3
10/14/2008	EP-139	10-10.5	High Occupancy (10)	27
10/14/2008	EP-142	6-6.5	High Occupancy (10)	19.8
10/14/2008	EP-142	8-8.5	High Occupancy (10)	20.7
10/14/2008	EP-143	6-6.5	High Occupancy (10)	34.5
10/14/2008	EP-143	8-8.5	High Occupancy (10)	93.9

All of the 19 samples which are above the applicable regulatory standard, which are described in **Table 5**, will be remediated via the excavation of the soils and the collection of cleanup verification samples conducted in accordance with 40 CFR 761.61(a)(6). **Figure Series 5**, included in **Appendix A**, depicts the locations of these samples, the sample names and concentrations, the proposed excavation boundaries, and the proposed cleanup verification grid sampling. The details of the proposed excavation and remediation are presented in **Section 5**.

4.2 PCB Soil Analytical Results – Subsection B

During the initial characterization and delineation sampling events there have been 318 samples collected in Subsection B, the boundaries of which are depicted in **Figure 4**. Many of these samples were collected to provide thorough delineation for the excavations that will extend beyond 15 fbg in this subsection. Out of these 318 samples, 143 of these have total PCB concentrations above the applicable regulatory standard. A summary of the soil samples that have total PCB concentrations below or equal to the applicable regulatory, and a summary of the soil samples that have total PCB concentrations above the applicable regulatory standard of are presented in **Table 5** and **6**, respectively.

Table 5: Analytical Results Summary for Sample Concentrations Less than or Equal to Applicable Regulatory Standard – Lot I; Subsection B

Sample Date	Sample ID	Sample Depth Range (fbg)	Proposed Development (Applicable Standard (mg/kg))	Total PCB Concentration (mg/kg)
11/07/2005	AOC2-016	20-20.5	High Occupancy (10)	<1
11/08/2005	AOC2-PE-013	20-20.5	High Occupancy (10)	<1.3
11/08/2005	AOC2-PE-020	18-18.5	High Occupancy (10)	1.6

05/25/2006	AOC2-PE-026	13.6-14.1	High Occupancy (10)	5.8
06/24/2009	EG-015	23-23.5	High Occupancy (10)	<1.9
07/25/2008	EG-015	3-3.5	High Occupancy (10)	8.44
07/24/2008	EG-016	5-5.5	High Occupancy (10)	7.39
07/25/2008	EG-022	16-16.5	Low Occupancy (25)	3.51
06/25/2009	EG-022	25-25.5	Low Occupancy (25)	<3.7
07/24/2008	EG-023	9-9.5	High Occupancy (10)	7.17
07/24/2008	EG-024	2-2.5	High Occupancy (10)	5.96
07/25/2008	EG-030	12-12.5	Low Occupancy (25)	4.41
07/25/2008	EG-041	13-13.5	High Occupancy (10)	<0.036
08/13/2008	EP-083	23-23.5	High Occupancy (10)	<0.038
08/13/2008	EP-084	22-22.5	High Occupancy (10)	<0.037
08/13/2008	EP-084	23-23.5	High Occupancy (10)	<0.04
06/03/2009	EP-084	27.5-28	High Occupancy (10)	<3.8
08/13/2008	EP-085	22-22.5	High Occupancy (10)	<0.036
08/13/2008	EP-085	23-23.5	High Occupancy (10)	<0.037
08/13/2008	EP-086	22-22.5	High Occupancy (10)	<0.034
08/13/2008	EP-086	23-23.5	High Occupancy (10)	<0.038
08/12/2008	EP-088	23-23.5	High Occupancy (10)	0.303
08/12/2008	EP-089	21-21.5	High Occupancy (10)	1.06
08/12/2008	EP-090	21-21.5	High Occupancy (10)	0.077
08/12/2008	EP-091	21-21.5	High Occupancy (10)	<0.035
08/13/2008	EP-092	19-19.5	High Occupancy (10)	4.29
08/13/2008	EP-092	21-21.5	High Occupancy (10)	0.09
08/12/2008	EP-093	17-17.5	High Occupancy (10)	<0.034
08/12/2008	EP-095	17-17.5	High Occupancy (10)	<0.034
08/12/2008	EP-096	17-17.5	High Occupancy (10)	<0.035
08/13/2008	EP-097	15-15.5	High Occupancy (10)	<0.034
08/13/2008	EP-097	17-17.5	High Occupancy (10)	<0.034
08/12/2008	EP-098	21-21.5	High Occupancy (10)	2.42
08/13/2008	EP-099	19-19.5	High Occupancy (10)	<0.037
08/13/2008	EP-099	21-21.5	High Occupancy (10)	<0.036
08/13/2008	EP-100	19-19.5	High Occupancy (10)	<0.034
08/13/2008	EP-100	21-21.5	High Occupancy (10)	<0.036
08/12/2008	EP-102	19-19.5	High Occupancy (10)	<0.034
08/12/2008	EP-102	21-21.5	High Occupancy (10)	<0.039
08/13/2008	EP-103	22-22.5	Low Occupancy (25)	<0.037
08/12/2008	EP-104	22-22.5	Low Occupancy (25)	0.029
03/17/2009	EP-1117	17.5-18	High Occupancy (10)	<1.7
03/17/2009	EP-1118	16-16.5	High Occupancy (10)	<1.7
03/17/2009	EP-1118	19-19.5	High Occupancy (10)	<1.8
03/17/2009	EP-1119	16-16.5	High Occupancy (10)	<1.7
03/17/2009	EP-1119	19-19.5	High Occupancy (10)	<1.8
03/17/2009	EP-1120	20-20.5	High Occupancy (10)	<3.6
03/17/2009	EP-1122	20-20.5	High Occupancy (10)	6.5
03/17/2009	EP-1123	16-16.5	High Occupancy (10)	9.5

06/02/2009	EP-1123	25-25.5	High Occupancy (10)	<3.6
03/17/2009	EP-1124	16-16.5	High Occupancy (10)	<3.8
06/05/2009	EP-1124	25-25.5	High Occupancy (10)	<3.6
06/02/2009	EP-1125	25-25.5	High Occupancy (10)	<3.9
06/02/2009	EP-1125	27-27.5	High Occupancy (10)	<3.8
03/17/2009	EP-1126	20-20.5	High Occupancy (10)	<3.6
03/17/2009	EP-1127	20-20.5	High Occupancy (10)	<3.7
03/17/2009	EP-1128	16-16.5	High Occupancy (10)	<3.6
03/17/2009	EP-1128	20-20.5	High Occupancy (10)	<3.7
03/17/2009	EP-1129	21-21.5	High Occupancy (10)	<3.7
03/17/2009	EP-1141	16-16.5	High Occupancy (10)	7.4
06/02/2009	EP-1141	29-29.5	High Occupancy (10)	<3.5
03/17/2009	EP-1180	19-19.5	High Occupancy (10)	<1.7
01/13/2009	EP-206	17-17.5	Low Occupancy (25)	7.7
01/13/2009	EP-206	22-22.5	Low Occupancy (25)	1.4
06/03/2009	EP-206	27.5-28	Low Occupancy (25)	<3.9
01/13/2009	EP-208	22-22.5	High Occupancy (10)	1.8
01/13/2009	EP-209	22-22.5	High Occupancy (10)	8.3
06/05/2009	EP-209	27.5-28	High Occupancy (10)	<4.4
01/13/2009	EP-210	17-17.5	Low Occupancy (25)	3
01/14/2009	EP-211	16-16.5	High Occupancy (10)	7.9
01/14/2009	EP-213	16-16.5	High Occupancy (10)	<0.4
01/14/2009	EP-216	21-21.5	High Occupancy (10)	0.63
01/14/2009	EP-217	21-21.5	High Occupancy (10)	1.6
01/14/2009	EP-218	21-21.5	High Occupancy (10)	3.7
01/14/2009	EP-220	21-21.5	High Occupancy (10)	5
01/14/2009	EP-221	21-21.5	High Occupancy (10)	5.5
01/13/2009	EP-222	21-21.5	High Occupancy (10)	<0.37
01/13/2009	EP-223	16-16.5	High Occupancy (10)	<0.34
01/13/2009	EP-224	16-16.5	High Occupancy (10)	<0.35
01/13/2009	EP-225	16-16.5	High Occupancy (10)	<0.34
01/14/2009	EP-228	20.5-21	High Occupancy (10)	1.6
01/14/2009	EP-229	15.5-16	High Occupancy (10)	<0.35
01/14/2009	EP-229	20.5-21	High Occupancy (10)	<0.36
01/14/2009	EP-230	15.5-16	High Occupancy (10)	<0.35
01/14/2009	EP-230	20.5-21	High Occupancy (10)	<0.35
01/14/2009	EP-231	15.5-16	High Occupancy (10)	<0.39
01/14/2009	EP-231	20.5-21	High Occupancy (10)	<0.37
01/14/2009	EP-232	17.5-18	High Occupancy (10)	<0.36
01/14/2009	EP-233	17.5-18	High Occupancy (10)	<0.37
01/14/2009	EP-234	17.5-18	High Occupancy (10)	<0.34
03/03/2009	EP-261	13-13.5	High Occupancy (10)	<3.8
03/03/2009	EP-261	21-21.5	High Occupancy (10)	<3.5
03/03/2009	EP-262	20-20.5	High Occupancy (10)	5.5
03/03/2009	EP-263	16-16.5	High Occupancy (10)	8.6
03/03/2009	EP-263	21-21.5	High Occupancy (10)	<3.7

03/03/2009	EP-264	23-23.5	High Occupancy (10)	5
03/03/2009	EP-265	13-13.5	High Occupancy (10)	<3.4
03/03/2009	EP-265	14-14.5	High Occupancy (10)	<3.4
03/03/2009	EP-265	22-22.5	High Occupancy (10)	<3.5
03/03/2009	EP-266	15-15.5	High Occupancy (10)	<3.5
03/03/2009	EP-266	22-22.5	High Occupancy (10)	<3.8
03/05/2009	EP-267	13-13.5	High Occupancy (10)	6.2
03/05/2009	EP-267	22-22.5	High Occupancy (10)	<4.1
06/05/2009	EP-267	27.5-28	High Occupancy (10)	<3.7
03/05/2009	EP-268	15-15.5	Low Occupancy (25)	<3.6
03/05/2009	EP-268	18-18.5	Low Occupancy (25)	<3.3
06/05/2009	EP-268	27.5-28	Low Occupancy (25)	<4.2
03/03/2009	EP-269	10-10.5	High Occupancy (10)	<3.4
03/03/2009	EP-269	15-15.5	High Occupancy (10)	<4.1
06/03/2009	EP-270	27-27.5	Low Occupancy (25)	7.3
03/05/2009	EP-271	15-15.5	High Occupancy (10)	<3.5
06/03/2009	EP-271	27-27.5	High Occupancy (10)	<3.8
03/05/2009	EP-272	15-15.5	High Occupancy (10)	<4.2
03/05/2009	EP-272	21-21.5	High Occupancy (10)	<3.7
03/03/2009	EP-273	21-21.5	High Occupancy (10)	<3.8
06/03/2009	EP-274	27-27.5	High Occupancy (10)	<3.7
03/05/2009	EP-276	15-15.5	High Occupancy (10)	<3.7
03/05/2009	EP-276	22-22.5	High Occupancy (10)	<3.8
03/05/2009	EP-277	15-15.5	High Occupancy (10)	<3.8
03/03/2009	EP-279	20-20.5	High Occupancy (10)	<3.8
03/03/2009	EP-280	20-20.5	High Occupancy (10)	<3.8
06/02/2009	EP-281	23-23.5	High Occupancy (10)	<3.6
06/02/2009	EP-281	27-27.5	High Occupancy (10)	<3.5
03/17/2009	EP-282	23-23.5	High Occupancy (10)	9
03/03/2009	EP-283	14-14.5	High Occupancy (10)	8.2
03/03/2009	EP-283	9-9.5	High Occupancy (10)	9.1
03/03/2009	EP-284	19-19.5	High Occupancy (10)	<3.6
03/03/2009	EP-285	18-18.5	High Occupancy (10)	<3.5
03/03/2009	EP-285	19-19.5	High Occupancy (10)	<3.6
06/25/2009	ES-071	25-25.5	High Occupancy (10)	<3.9
06/25/2009	ES-072	25-25.5	High Occupancy (10)	<3.6
06/25/2009	ES-073	25-25.5	High Occupancy (10)	<3.7
06/02/2009	ES-074	23-23.5	High Occupancy (10)	5.2
06/02/2009	ES-075	25-25.5	High Occupancy (10)	8.3
06/02/2009	ES-075	27-27.5	High Occupancy (10)	<3.5
06/02/2009	ES-075	29-29.5	High Occupancy (10)	<3.7
06/02/2009	ES-076	17.5-18	High Occupancy (10)	<3.5
06/02/2009	ES-077	17.5-18	High Occupancy (10)	<3.3
06/02/2009	ES-078	17.5-18	High Occupancy (10)	4.7
06/03/2009	ES-081	25-25.5	High Occupancy (10)	4.8
06/05/2009	ES-082	17.5-18	High Occupancy (10)	<4.3

06/05/2009	ES-083	17.5-18	High Occupancy (10)	5
06/05/2009	ES-083	22.5-23	High Occupancy (10)	<3.6
06/25/2009	ES-152	17.5-18	Low Occupancy (25)	<4.3
06/25/2009	ES-152	23-23.5	Low Occupancy (25)	<3.9
06/25/2009	ES-153	23-23.5	Low Occupancy (25)	6.3
06/24/2009	ES-154	17.5-18	Low Occupancy (25)	<1.8
06/24/2009	ES-154	23-23.5	Low Occupancy (25)	<1.8
06/24/2009	ES-155	25-25.5	High Occupancy (10)	<3.9
06/24/2009	ES-156	17.5-18	High Occupancy (10)	<1.8
06/24/2009	ES-156	23-23.5	High Occupancy (10)	<1.8
06/24/2009	ES-157	17.5-18	High Occupancy (10)	<1.8
06/24/2009	ES-157	23-23.5	High Occupancy (10)	<2
06/24/2009	ES-158	17.5-18	High Occupancy (10)	<1.8
06/24/2009	ES-158	23-23.5	High Occupancy (10)	<2
06/24/2009	ES-159	23-23.5	High Occupancy (10)	<1.8
07/29/2009	ES-166	23-23.5	High Occupancy (10)	4.3
07/15/2009	ES-167	17.5-18	High Occupancy (10)	<1.8
07/15/2009	ES-167	23-23.5	High Occupancy (10)	4.4
07/15/2009	ES-167	25-25.5	High Occupancy (10)	<1.9
07/15/2009	ES-167	27-27.5	High Occupancy (10)	<1.9
07/15/2009	ES-168	17.5-18	High Occupancy (10)	<1.9
07/15/2009	ES-168	23-23.5	High Occupancy (10)	<1.9
07/15/2009	ES-168	25-25.5	High Occupancy (10)	<1.8
07/15/2009	ES-168	27-27.5	High Occupancy (10)	<2
07/29/2009	ES-178	17.5-18	Low Occupancy (25)	<2.5
8/12/2009	ES-178	27-27.5	Low Occupancy (25)	<4.1
10/04/2005	HYD-001	17-17.5	High Occupancy (10)	<0.12

Table 6: Analytical Results Summary for Sample Concentrations Greater than Applicable Regulatory Standard – Lot I; Subsection B

Sample Date	Sample ID	Sample Depth Range (fbg)	Proposed Development (Applicable Standard (mg/kg))	Total PCB Concentration (mg/kg)
11/08/2005	AOC2-PE-018	18-18.5	High Occupancy (10)	35
05/25/2006	AOC2-PE-021	19-19.5	High Occupancy (10)	350
01/10/2007	AOC2-PE-022	19-19.5	High Occupancy (10)	19.3
05/25/2006	AOC2-PE-031	15-15.5	High Occupancy (10)	14
04/25/2007	AOC2-PE-051	22-22.5	High Occupancy (10)	3200
06/03/2009	EG-015	17.5-18	High Occupancy (10)	116
06/03/2009	EG-015	22.5-23	High Occupancy (10)	33.2
06/03/2009	EG-022	22.5-23	Low Occupancy (25)	1100
06/25/2009	EG-022	23-23.5	Low Occupancy (25)	2880
07/25/2008	EG-025	18-18.5	High Occupancy (10)	12.6
07/25/2008	EG-031	9-9.5	High Occupancy (10)	84.1
07/25/2008	EG-032	12-12.5	High Occupancy (10)	20.9
07/24/2008	EG-033	5-5.5	High Occupancy (10)	56.1
07/24/2008	EG-039	16-16.5	High Occupancy (10)	119

07/25/2008	EG-040	10-10.5	High Occupancy (10)	25.2
08/13/2008	EP-087	22-22.5	Low Occupancy (25)	57.9
08/13/2008	EP-087	23-23.5	Low Occupancy (25)	99.2
08/12/2008	EP-088	21-21.5	High Occupancy (10)	21.6
08/12/2008	EP-094	17-17.5	High Occupancy (10)	23.2
06/03/2009	EP-103	17.5-18	Low Occupancy (25)	346
03/17/2009	EP-1120	16-16.5	High Occupancy (10)	590
03/17/2009	EP-1121	16-16.5	High Occupancy (10)	142
03/17/2009	EP-1121	20-20.5	High Occupancy (10)	473
03/17/2009	EP-1122	16-16.5	High Occupancy (10)	11
03/17/2009	EP-1123	20-20.5	High Occupancy (10)	299
06/02/2009	EP-1123	23-23.5	High Occupancy (10)	11.4
03/17/2009	EP-1124	20-20.5	High Occupancy (10)	2010
06/02/2009	EP-1124	21-21.5	High Occupancy (10)	108
06/05/2009	EP-1124	23-23.5	High Occupancy (10)	75.8
03/17/2009	EP-1125	16-16.5	High Occupancy (10)	45.4
03/17/2009	EP-1125	20-20.5	High Occupancy (10)	300
06/02/2009	EP-1125	23-23.5	High Occupancy (10)	56.4
03/17/2009	EP-1126	16-16.5	High Occupancy (10)	64.6
03/17/2009	EP-1127	16-16.5	High Occupancy (10)	62.1
03/17/2009	EP-1129	15-15.5	High Occupancy (10)	23.6
03/17/2009	EP-1129	16-16.5	High Occupancy (10)	76.9
03/17/2009	EP-1129	19-19.5	High Occupancy (10)	3790
03/17/2009	EP-1129	20-20.5	High Occupancy (10)	595
03/17/2009	EP-1141	20-20.5	High Occupancy (10)	1040
06/02/2009	EP-1141	23-23.5	High Occupancy (10)	33.4
06/02/2009	EP-1141	25-25.5	High Occupancy (10)	958
06/02/2009	EP-1141	27-27.5	High Occupancy (10)	39.5
03/17/2009	EP-1180	16-16.5	High Occupancy (10)	18.6
01/13/2009	EP-205	17-17.5	Low Occupancy (25)	308
01/13/2009	EP-205	22-22.5	Low Occupancy (25)	25.7
01/13/2009	EP-207	17-17.5	High Occupancy (10)	228
01/13/2009	EP-207	22-22.5	High Occupancy (10)	12.6
01/13/2009	EP-208	17-17.5	High Occupancy (10)	302
01/13/2009	EP-209	17-17.5	High Occupancy (10)	364
01/13/2009	EP-210	22-22.5	Low Occupancy (25)	3220
01/14/2009	EP-212	16-16.5	High Occupancy (10)	22.5
01/14/2009	EP-214	16-16.5	Low Occupancy (25)	1270
01/14/2009	EP-215	16-16.5	High Occupancy (10)	51.7
01/14/2009	EP-215	21-21.5	High Occupancy (10)	180
01/14/2009	EP-216	16-16.5	High Occupancy (10)	29.9
01/14/2009	EP-217	16-16.5	High Occupancy (10)	49.7
01/14/2009	EP-218	16-16.5	High Occupancy (10)	21.2
01/14/2009	EP-219	16-16.5	High Occupancy (10)	59.2
01/14/2009	EP-219	21-21.5	High Occupancy (10)	33.3
01/14/2009	EP-220	16-16.5	High Occupancy (10)	26.6

01/14/2009	EP-221	16-16.5	High Occupancy (10)	30.5
01/13/2009	EP-222	16-16.5	High Occupancy (10)	77.3
01/13/2009	EP-226	16-16.5	High Occupancy (10)	32.1
01/13/2009	EP-227	16-16.5	High Occupancy (10)	36.4
01/14/2009	EP-228	15.5-16	High Occupancy (10)	598
01/14/2009	EP-235	17.5-18	High Occupancy (10)	23.6
03/03/2009	EP-261	14-14.5	High Occupancy (10)	63.8
03/03/2009	EP-261	15-15.5	High Occupancy (10)	38.9
03/03/2009	EP-261	16-16.5	High Occupancy (10)	28.2
03/03/2009	EP-262	16-16.5	High Occupancy (10)	21
03/03/2009	EP-264	15-15.5	High Occupancy (10)	22.3
03/03/2009	EP-264	17-17.5	High Occupancy (10)	1090
03/03/2009	EP-264	18-18.5	High Occupancy (10)	2260
03/03/2009	EP-265	15-15.5	High Occupancy (10)	54
03/03/2009	EP-266	10-10.5	High Occupancy (10)	84.8
03/05/2009	EP-267	14-14.5	High Occupancy (10)	29.3
03/05/2009	EP-267	15-15.5	High Occupancy (10)	57.4
03/05/2009	EP-270	13-13.5	Low Occupancy (25)	29.3
03/05/2009	EP-270	14-14.5	Low Occupancy (25)	44
03/05/2009	EP-270	15-15.5	Low Occupancy (25)	362
03/05/2009	EP-270	24-24.5	Low Occupancy (25)	2210
03/05/2009	EP-270	25-25.5	Low Occupancy (25)	2780
03/05/2009	EP-270	26-26.5	Low Occupancy (25)	29.9
03/05/2009	EP-271	22-22.5	High Occupancy (10)	10.1
03/05/2009	EP-271	23-23.5	High Occupancy (10)	25.4
03/05/2009	EP-271	24-24.5	High Occupancy (10)	93
03/05/2009	EP-271	25-25.5	High Occupancy (10)	6720
03/05/2009	EP-272	10-10.5	High Occupancy (10)	22.2
03/03/2009	EP-273	10-10.5	High Occupancy (10)	31.9
03/03/2009	EP-273	15-15.5	High Occupancy (10)	12.1
03/05/2009	EP-274	14-14.5	High Occupancy (10)	24.9
03/05/2009	EP-274	15-15.5	High Occupancy (10)	562
03/05/2009	EP-274	23-23.5	High Occupancy (10)	2190
03/05/2009	EP-274	24-24.5	High Occupancy (10)	301
03/05/2009	EP-274	25-25.5	High Occupancy (10)	26.7
03/05/2009	EP-275	13-13.5	High Occupancy (10)	19
03/05/2009	EP-275	14-14.5	High Occupancy (10)	35.2
03/05/2009	EP-275	15-15.5	High Occupancy (10)	305
03/05/2009	EP-275	9-9.5	High Occupancy (10)	39.7
03/05/2009	EP-277	9-9.5	High Occupancy (10)	233
03/03/2009	EP-278	15-15.5	High Occupancy (10)	10.4
03/03/2009	EP-279	16-16.5	High Occupancy (10)	43.6
03/03/2009	EP-280	16-16.5	High Occupancy (10)	157
03/03/2009	EP-281	16-16.5	High Occupancy (10)	51.2
03/03/2009	EP-281	20-20.5	High Occupancy (10)	3840
03/17/2009	EP-281	21-21.5	High Occupancy (10)	1690

03/17/2009	EP-281	22-22.5	High Occupancy (10)	1060
03/17/2009	EP-281	23-23.5	High Occupancy (10)	14.6
06/02/2009	EP-281	25-25.5	High Occupancy (10)	26.8
03/03/2009	EP-282	16-16.5	High Occupancy (10)	30
03/03/2009	EP-282	20-20.5	High Occupancy (10)	3580
03/17/2009	EP-282	21-21.5	High Occupancy (10)	2040
03/17/2009	EP-282	22-22.5	High Occupancy (10)	21.1
03/03/2009	EP-283	15-15.5	High Occupancy (10)	1020
03/03/2009	EP-284	13-13.5	High Occupancy (10)	95.7
03/03/2009	EP-284	14-14.5	High Occupancy (10)	52.1
03/03/2009	EP-284	15-15.5	High Occupancy (10)	40.1
03/03/2009	EP-284	17-17.5	High Occupancy (10)	24.3
03/03/2009	EP-284	18-18.5	High Occupancy (10)	12.2
03/03/2009	EP-285	13-13.5	High Occupancy (10)	84.8
03/03/2009	EP-285	14-14.5	High Occupancy (10)	89.6
03/03/2009	EP-285	15-15.5	High Occupancy (10)	34.6
03/03/2009	EP-285	17-17.5	High Occupancy (10)	35.7
06/03/2009	ES-071	17.5-18	High Occupancy (10)	245
06/03/2009	ES-071	22.5-23	High Occupancy (10)	2500
06/03/2009	ES-072	17.5-18	High Occupancy (10)	397
06/03/2009	ES-072	22.5-23	High Occupancy (10)	860
06/03/2009	ES-073	17.5-18	High Occupancy (10)	29.6
06/03/2009	ES-073	22.5-23	High Occupancy (10)	266
06/02/2009	ES-075	23-23.5	High Occupancy (10)	31
06/02/2009	ES-076	22.5-23	High Occupancy (10)	21.5
06/02/2009	ES-079	17.5-18	High Occupancy (10)	50.8
06/25/2009	ES-153	17.5-18	Low Occupancy (25)	123
06/24/2009	ES-155	17.5-18	High Occupancy (10)	16.9
06/24/2009	ES-155	23-23.5	High Occupancy (10)	16.5
06/24/2009	ES-159	17.5-18	High Occupancy (10)	20.3
07/29/2009	ES-166	17.5-18	Low Occupancy (25)	1340
07/29/2009	ES-178	23-23.5	Low Occupancy (25)	2680
07/29/2009	ES-178	25-25.5	Low Occupancy (25)	4030
07/29/2009	ES-179	17.5-18	Low Occupancy (25)	2280
07/29/2009	ES-179	23-23.5	Low Occupancy (25)	18.2
07/29/2009	ES-180	17.5-18	Low Occupancy (25)	23.1
07/29/2009	ES-180	22-22.5	Low Occupancy (25)	5140

All of the 143 samples which are above the applicable regulatory standard, which are described in **Table 6**, will be remediated via the excavation of the soils. Cleanup verification samples will be collected in accordance with 40 CFR 761.61(a)(6). **Figure Series 6**, included in **Appendix A**, depicts the locations of these samples, the sample names and concentrations, the proposed excavation boundaries, and the proposed cleanup verification grid sampling. The details of the proposed excavation and remediation are presented in **Section 5**.

03/17/2009	EP-281	22-22.5	High Occupancy (10)	1060
03/17/2009	EP-281	23-23.5	High Occupancy (10)	14.6
06/02/2009	EP-281	25-25.5	High Occupancy (10)	26.8
03/03/2009	EP-282	16-16.5	High Occupancy (10)	30
03/03/2009	EP-282	20-20.5	High Occupancy (10)	3580
03/17/2009	EP-282	21-21.5	High Occupancy (10)	2040
03/17/2009	EP-282	22-22.5	High Occupancy (10)	21.1
03/03/2009	EP-283	15-15.5	High Occupancy (10)	1020
03/03/2009	EP-284	13-13.5	High Occupancy (10)	95.7
03/03/2009	EP-284	14-14.5	High Occupancy (10)	52.1
03/03/2009	EP-284	15-15.5	High Occupancy (10)	40.1
03/03/2009	EP-284	17-17.5	High Occupancy (10)	24.3
03/03/2009	EP-284	18-18.5	High Occupancy (10)	12.2
03/03/2009	EP-285	13-13.5	High Occupancy (10)	84.8
03/03/2009	EP-285	14-14.5	High Occupancy (10)	89.6
03/03/2009	EP-285	15-15.5	High Occupancy (10)	34.6
03/03/2009	EP-285	17-17.5	High Occupancy (10)	35.7
06/03/2009	ES-071	17.5-18	High Occupancy (10)	245
06/03/2009	ES-071	22.5-23	High Occupancy (10)	2500
06/03/2009	ES-072	17.5-18	High Occupancy (10)	397
06/03/2009	ES-072	22.5-23	High Occupancy (10)	860
06/03/2009	ES-073	17.5-18	High Occupancy (10)	29.6
06/03/2009	ES-073	22.5-23	High Occupancy (10)	266
06/02/2009	ES-075	23-23.5	High Occupancy (10)	31
06/02/2009	ES-076	22.5-23	High Occupancy (10)	21.5
06/02/2009	ES-079	17.5-18	High Occupancy (10)	50.8
06/25/2009	ES-153	17.5-18	Low Occupancy (25)	123
06/24/2009	ES-155	17.5-18	High Occupancy (10)	16.9
06/24/2009	ES-155	23-23.5	High Occupancy (10)	16.5
06/24/2009	ES-159	17.5-18	High Occupancy (10)	20.3
07/29/2009	ES-166	17.5-18	Low Occupancy (25)	1340
07/29/2009	ES-178	23-23.5	Low Occupancy (25)	2680
07/29/2009	ES-178	25-25.5	Low Occupancy (25)	4030
07/29/2009	ES-179	17.5-18	Low Occupancy (25)	2280
07/29/2009	ES-179	23-23.5	Low Occupancy (25)	18.2
07/29/2009	ES-180	17.5-18	Low Occupancy (25)	23.1
07/29/2009	ES-180	22-22.5	Low Occupancy (25)	5140

All of the 143 samples which are above the applicable regulatory standard, which are described in **Table 6**, will be remediated via the excavation of the soils. For excavations that do not already have delineation samples that define the boundaries of the excavation, cleanup verification samples will be collected in accordance with 40 CFR 761.61(a)(6). **Figure Series 6**, included in **Appendix A**, depicts the locations of these samples, the sample names and concentrations, the proposed excavation boundaries, and the proposed cleanup verification grid sampling. The details of the proposed excavation and remediation are presented in **Section 5**.

4.3 PCB Soil Analytical Results – Subsection C

During the initial characterization and delineation sampling events there have been 165 samples collected in Subsection C, the boundaries of which are depicted in **Figure 4**. Many of these samples were collected to provide thorough delineation for the excavations that will extend beyond 15 fbg in this subsection. Out of these 165 samples 69 of these have total PCB concentrations above the applicable regulatory standard. A summary of the soil samples that have total PCB concentrations below or equal to the applicable regulatory standard, and a summary of the soil samples that have total PCB concentrations above the applicable regulatory standard are presented in **Table 7** and **8**, respectively.

Table 7: Analytical Results Summary for Sample Concentrations Less than or Equal to Applicable Regulatory Standard – Lot I; Subsection C

Sample Date	Sample ID	Sample Depth Range (fbg)	Proposed Development (Applicable Standard (mg/kg))	Total PCB Concentration (mg/kg)
01/11/2007	AOC2-026	6-6.5	High Occupancy (10)	<0.05
01/11/2007	AOC2-026	12-12.5	High Occupancy (10)	<0.05
01/11/2007	AOC2-026	16-16.5	High Occupancy (10)	<0.05
01/11/2007	AOC2-026	18.5-19	High Occupancy (10)	<0.05
05/25/2006	AOC2-PE-032	19-19.5	High Occupancy (10)	0.12
04/24/2007	AOC2-PE-049	12-12.5	High Occupancy (10)	0.89
04/27/2007	AOC2-PE-052	18-18.5	High Occupancy (10)	0.23
04/27/2007	AOC2-PE-054	18-18.5	High Occupancy (10)	1.11
05/07/2007	AOC2-PE-055	19-19.5	High Occupancy (10)	<0.042
05/07/2007	AOC2-PE-056	19-19.5	High Occupancy (10)	0.13
05/07/2007	AOC2-PE-057	19-19.5	High Occupancy (10)	<0.05
05/07/2007	AOC2-PE-059	12-12.5	High Occupancy (10)	0.79
05/07/2007	AOC2-PE-060	12-12.5	High Occupancy (10)	<0.039
07/25/2008	EG-028	12-12.5	High Occupancy (10)	2.33
07/24/2008	EG-029	3-3.5	High Occupancy (10)	1.59
07/25/2008	EG-035	10-10.5	High Occupancy (10)	<0.037
07/25/2008	EG-036	11-11.5	High Occupancy (10)	<0.037
07/25/2008	EG-043	12-12.5	High Occupancy (10)	<0.037
07/24/2008	EG-044	12-12.5	High Occupancy (10)	<0.034
07/25/2008	EG-045	4-4.5	High Occupancy (10)	7.91
07/25/2008	EG-047	17-17.5	High Occupancy (10)	0.033
07/25/2008	EG-049	15-15.5	High Occupancy (10)	0.893
08/12/2008	EP-101	21-21.5	High Occupancy (10)	2.47
08/12/2008	EP-105	22-22.5	Low Occupancy (25)	0.043
08/12/2008	EP-106	22-22.5	High Occupancy (10)	0.949
08/12/2008	EP-107	22-22.5	High Occupancy (10)	<0.034
08/13/2008	EP-108	10-10.5	High Occupancy (10)	<0.038
08/13/2008	EP-109	10-10.5	High Occupancy (10)	0.029
08/13/2008	EP-110	8.5-9	High Occupancy (10)	0.465
08/13/2008	EP-110	10-10.5	High Occupancy (10)	0.222
08/13/2008	EP-111	8.5-9	High Occupancy (10)	2.25
08/13/2008	EP-111	10-10.5	High Occupancy (10)	3.02
08/13/2008	EP-112	8.5-9	High Occupancy (10)	0.116
08/13/2008	EP-112	12-12.5	High Occupancy (10)	<0.036
08/13/2008	EP-113	8.5-9	High Occupancy (10)	2.4
08/13/2008	EP-113	10-10.5	High Occupancy (10)	5.93
08/13/2008	EP-116	8.5-9	High Occupancy (10)	<0.037

08/13/2008	EP-116	10-10.5	High Occupancy (10)	<0.037
10/14/2008	EP-144	2-2.5	High Occupancy (10)	3.45
10/14/2008	EP-144	4-4.5	High Occupancy (10)	0.761
10/14/2008	EP-144	8-8.5	High Occupancy (10)	2.58
10/14/2008	EP-144	14-14.5	High Occupancy (10)	5.94
10/14/2008	EP-145	12-12.5	High Occupancy (10)	0.993
10/14/2008	EP-145	14-14.5	High Occupancy (10)	2.36
10/14/2008	EP-146	12-12.5	High Occupancy (10)	2.2
10/14/2008	EP-146	14-14.5	High Occupancy (10)	1.03
10/14/2008	EP-147	12-12.5	High Occupancy (10)	0.659
10/14/2008	EP-147	14-14.5	High Occupancy (10)	<0.036
10/14/2008	EP-148	12-12.5	High Occupancy (10)	5.99
10/14/2008	EP-148	14-14.5	High Occupancy (10)	4.04
10/14/2008	EP-150	2-2.5	High Occupancy (10)	5.37
10/14/2008	EP-150	6-6.5	High Occupancy (10)	9.21
10/14/2008	EP-150	8-8.5	High Occupancy (10)	<0.037
10/14/2008	EP-151	6-6.5	High Occupancy (10)	0.149
10/14/2008	EP-151	8-8.5	High Occupancy (10)	<0.036
10/14/2008	EP-153	2-2.5	High Occupancy (10)	6.98
10/14/2008	EP-153	4-4.5	High Occupancy (10)	3.36
10/14/2008	EP-153	6-6.5	High Occupancy (10)	<0.036
10/14/2008	EP-153	8-8.5	High Occupancy (10)	<0.035
10/14/2008	EP-154	4-4.5	High Occupancy (10)	4.74
01/13/2009	EP-237	16.5-17	High Occupancy (10)	1.2
01/13/2009	EP-238	16.5-17	High Occupancy (10)	1.1
03/05/2009	EP-257	18-18.5	High Occupancy (10)	<3.5
03/05/2009	EP-258	20-20.5	High Occupancy (10)	8.4
07/15/2009	ES-080	25-25.5	High Occupancy (10)	<1.9
07/15/2009	ES-151	25-25.5	Low Occupancy (25)	<1.9
07/15/2009	ES-160	25-25.5	High Occupancy (10)	<2
06/25/2009	ES-162	22-22.5	Low Occupancy (25)	23.7
07/15/2009	ES-163	27-27.5	Low Occupancy (25)	<4.2
07/15/2009	ES-163	29-29.5	Low Occupancy (25)	<1.8
07/15/2009	ES-164	23-23.5	High Occupancy (10)	<2
07/29/2009	ES-169	17.5-18	High Occupancy (10)	<2.6
07/29/2009	ES-169	23-23.5	High Occupancy (10)	<2
07/29/2009	ES-170	17.5-18	High Occupancy (10)	<1.9
07/29/2009	ES-170	23-23.5	High Occupancy (10)	<1.9
07/29/2009	ES-171	17.5-18	Low Occupancy (25)	<2
07/29/2009	ES-172	17.5-18	Low Occupancy (25)	<2.1
07/29/2009	ES-172	23-23.5	Low Occupancy (25)	9.6
07/29/2009	ES-172	27-27.5	Low Occupancy (25)	<1.8
07/29/2009	ES-173	17.5-18	Low Occupancy (25)	<2
07/29/2009	ES-173	23-23.5	Low Occupancy (25)	<1.8
07/29/2009	ES-173	27-27.5	Low Occupancy (25)	<2
08/12/2009	ES-174	17.5-18	Low Occupancy (25)	<3.6
08/12/2009	ES-174	27-27.5	Low Occupancy (25)	<3.7
08/12/2009	ES-175	23-23.5	Low Occupancy (25)	4.3
08/12/2009	ES-175	27-27.5	Low Occupancy (25)	<4.1
08/12/2009	ES-176	23-23.5	High Occupancy (10)	<3.8
08/12/2009	ES-176	27-27.5	High Occupancy (10)	<3.8
08/12/2009	ES-177	23-23.5	High Occupancy (10)	<3.7

08/12/2009	ES-177	27-27.5	High Occupancy (10)	<3.8
08/12/2009	ES-181	17.5-18	Low Occupancy (25)	<4.1
08/12/2009	ES-181	23-23.5	Low Occupancy (25)	<3.6
10/30/2002	MW-002	6-6.5	High Occupancy (10)	0.328
10/30/2002	MW-002	16-16.5	High Occupancy (10)	0.345
10/24/2002	TP-012	4-4.5	High Occupancy (10)	ND
10/24/2002	TP-012	16-16.5	High Occupancy (10)	ND

Table 8: Analytical Results Summary for Sample Concentrations Greater than Applicable Regulatory Standard – Lot I; Subsection C

Sample Date	Sample ID	Sample Depth Range (fbg)	Proposed Development (Applicable Standard (mg/kg))	Total PCB Concentration (mg/kg)
05/25/2006	AOC2-PE-030	8.5-9	High Occupancy (10)	16
05/07/2007	AOC2-PE-058	12-12.5	High Occupancy (10)	110
07/24/2008	EG-034	2-2.5	High Occupancy (10)	72.8
10/14/2008	EG-037	2-2.5	High Occupancy (10)	23
10/14/2008	EG-037	4-4.5	High Occupancy (10)	14.6
07/24/2008	EG-037	6-6.5	High Occupancy (10)	579
10/14/2008	EG-037	8-8.5	High Occupancy (10)	73.8
07/24/2008	EG-038	1-1.5	High Occupancy (10)	17.3
07/24/2008	EG-042	1-1.5	High Occupancy (10)	44.6
07/25/2008	EG-046	6-6.5	High Occupancy (10)	14.7
07/25/2008	EG-048	8-8.5	High Occupancy (10)	27.5
07/25/2008	EG-050	17-17.5	High Occupancy (10)	153
07/24/2008	EG-051	13-13.5	High Occupancy (10)	16.6
07/25/2008	EG-052	4-4.5	High Occupancy (10)	29.6
07/24/2008	EG-053	8-8.5	High Occupancy (10)	12.3
07/25/2008	EG-054	4-4.5	High Occupancy (10)	22.8
07/24/2008	EG-055	1-1.5	High Occupancy (10)	48.2
08/13/2008	EP-109	8.5-9	High Occupancy (10)	37.6
08/13/2008	EP-112	10-10.5	High Occupancy (10)	30.9
10/14/2008	EP-144	6-6.5	High Occupancy (10)	24.1
10/14/2008	EP-150	4-4.5	High Occupancy (10)	39.5
10/14/2008	EP-151	2-2.5	High Occupancy (10)	225
10/14/2008	EP-151	4-4.5	High Occupancy (10)	57.5
10/14/2008	EP-154	2-2.5	High Occupancy (10)	12.1
10/14/2008	EP-154	6-6.5	High Occupancy (10)	45
10/14/2008	EP-154	8-8.5	High Occupancy (10)	15
01/13/2009	EP-236	16.5-17	High Occupancy (10)	469
01/13/2009	EP-239	16.5-17	High Occupancy (10)	682
03/05/2009	EP-256	18-18.5	High Occupancy (10)	2480
03/05/2009	EP-258	16-16.5	High Occupancy (10)	22
03/05/2009	EP-258	18-18.5	High Occupancy (10)	45.9
03/05/2009	EP-258	19-19.5	High Occupancy (10)	945
03/05/2009	EP-259	18-18.5	High Occupancy (10)	13700
06/02/2009	ES-080	17.5-18	High Occupancy (10)	638
06/25/2009	ES-080	19-19.5	High Occupancy (10)	3630
06/25/2009	ES-080	20-20.5	High Occupancy (10)	2890
06/25/2009	ES-080	23-23.5	High Occupancy (10)	1980
06/05/2009	ES-084	17.5-18	High Occupancy (10)	6570
06/11/2009	ES-085	1-1.5	High Occupancy (10)	71.5
06/11/2009	ES-086	1-1.5	High Occupancy (10)	145

06/11/2009	ES-087	1-1.5	High Occupancy (10)	142
06/11/2009	ES-088	1-1.5	High Occupancy (10)	261
06/11/2009	ES-089	1-1.5	High Occupancy (10)	62.9
06/25/2009	ES-151	16.5-17	Low Occupancy (25)	1670
06/25/2009	ES-151	20-20.5	Low Occupancy (25)	1140
06/25/2009	ES-151	22-22.5	Low Occupancy (25)	899
06/25/2009	ES-160	16.5-17	High Occupancy (10)	2200
06/25/2009	ES-160	22-22.5	High Occupancy (10)	438
06/25/2009	ES-160	23-23.5	High Occupancy (10)	91.8
06/25/2009	ES-161	16.5-17	High Occupancy (10)	25.5
06/25/2009	ES-161	22-22.5	High Occupancy (10)	537
06/25/2009	ES-161	23-23.5	High Occupancy (10)	24.7
07/15/2009	ES-161	25-25.5	High Occupancy (10)	52.7
07/15/2009	ES-161	27-27.5	High Occupancy (10)	39.7
07/15/2009	ES-161	29-29.5	High Occupancy (10)	43.6
06/25/2009	ES-162	16.5-17	Low Occupancy (25)	357
07/15/2009	ES-163	16.5-17	Low Occupancy (25)	1250
07/15/2009	ES-163	23-23.5	Low Occupancy (25)	5290
07/15/2009	ES-163	25-25.5	Low Occupancy (25)	36.5
07/15/2009	ES-164	16.5-17	High Occupancy (10)	663
07/15/2009	ES-165	16.5-17	High Occupancy (10)	5260
07/15/2009	ES-165	23-23.5	High Occupancy (10)	52.6
07/15/2009	ES-165	27-27.5	High Occupancy (10)	34.3
07/15/2009	ES-165	29-29.5	High Occupancy (10)	52
07/29/2009	ES-171	20-20.5	Low Occupancy (25)	83.3
08/12/2009	ES-174	23-23.5	Low Occupancy (25)	36.3
08/12/2009	ES-175	17.5-18	Low Occupancy (25)	2150
08/12/2009	ES-176	17.5-18	High Occupancy (10)	1250
08/12/2009	ES-177	17.5-18	High Occupancy (10)	1350

All of the 69 samples which are above the applicable regulatory standard, which are described in **Table 8**, will be remediated via the excavation of the soils. Cleanup verification samples will be collected in accordance with 40 CFR 761.61(a)(6). **Figure Series 7**, included in **Appendix A**, depicts the locations of these samples, the sample names and concentrations, the proposed excavation boundaries, and the proposed cleanup verification grid sampling. The details of the proposed excavation and remediation are presented in **Section 5**.

4.4 PCB Soil Analytical Results – Subsection D

During the initial characterization and delineation sampling events there have been 40 samples collected in Subsection D, the boundaries of which are depicted in **Figure 4**. Out of these 40 samples ten (10) of these have total PCB concentrations above the applicable regulatory standard. A summary of the soil samples that have total PCB concentrations below or equal to the applicable regulatory standard, and a summary of the soil samples that have total PCB concentrations above the applicable regulatory standard are presented in **Table 9** and **10**, respectively.

06/11/2009	ES-087	1-1.5	High Occupancy (10)	142
06/11/2009	ES-088	1-1.5	High Occupancy (10)	261
06/11/2009	ES-089	1-1.5	High Occupancy (10)	62.9
06/25/2009	ES-151	16.5-17	Low Occupancy (25)	1670
06/25/2009	ES-151	20-20.5	Low Occupancy (25)	1140
06/25/2009	ES-151	22-22.5	Low Occupancy (25)	899
06/25/2009	ES-160	16.5-17	High Occupancy (10)	2200
06/25/2009	ES-160	22-22.5	High Occupancy (10)	438
06/25/2009	ES-160	23-23.5	High Occupancy (10)	91.8
06/25/2009	ES-161	16.5-17	High Occupancy (10)	25.5
06/25/2009	ES-161	22-22.5	High Occupancy (10)	537
06/25/2009	ES-161	23-23.5	High Occupancy (10)	24.7
07/15/2009	ES-161	25-25.5	High Occupancy (10)	52.7
07/15/2009	ES-161	27-27.5	High Occupancy (10)	39.7
07/15/2009	ES-161	29-29.5	High Occupancy (10)	43.6
06/25/2009	ES-162	16.5-17	Low Occupancy (25)	357
07/15/2009	ES-163	16.5-17	Low Occupancy (25)	1250
07/15/2009	ES-163	23-23.5	Low Occupancy (25)	5290
07/15/2009	ES-163	25-25.5	Low Occupancy (25)	36.5
07/15/2009	ES-164	16.5-17	High Occupancy (10)	663
07/15/2009	ES-165	16.5-17	High Occupancy (10)	5260
07/15/2009	ES-165	23-23.5	High Occupancy (10)	52.6
07/15/2009	ES-165	27-27.5	High Occupancy (10)	34.3
07/15/2009	ES-165	29-29.5	High Occupancy (10)	52
07/29/2009	ES-171	20-20.5	Low Occupancy (25)	83.3
08/12/2009	ES-174	23-23.5	Low Occupancy (25)	36.3
08/12/2009	ES-175	17.5-18	Low Occupancy (25)	2150
08/12/2009	ES-176	17.5-18	High Occupancy (10)	1250
08/12/2009	ES-177	17.5-18	High Occupancy (10)	1350

All of the 69 samples which are above the applicable regulatory standard, which are described in **Table 8**, will be remediated via the excavation of the soils. For excavations that do not already have delineation samples that define the boundaries of the excavation, cleanup verification samples will be collected in accordance with 40 CFR 761.61(a)(6). **Figure Series 7**, included in **Appendix A**, depicts the locations of these samples, the sample names and concentrations, the proposed excavation boundaries, and the proposed cleanup verification grid sampling. The details of the proposed excavation and remediation are presented in **Section 5**.

4.4 PCB Soil Analytical Results – Subsection D

During the initial characterization and delineation sampling events there have been 40 samples collected in Subsection D, the boundaries of which are depicted in **Figure 4**. Out of these 40 samples ten (10) of these have total PCB concentrations above the applicable regulatory standard. A summary of the soil samples that have total PCB concentrations below or equal to the applicable regulatory standard, and a summary of the soil samples that have total PCB concentrations above the applicable regulatory standard are presented in **Table 9** and **10**, respectively.

Table 9: Analytical Results Summary for Sample Concentrations Less than or Equal to Applicable Regulatory Standard – Lot I; Subsection D

Sample Date	Sample ID	Sample Depth Range (fbg)	Proposed Development (Applicable Standard (mg/kg))	Total PCB Concentration (mg/kg)
04/25/2005	ES-097	1-1.5	High Occupancy (10)	5
04/25/2005	VB-PE-008	12-12.5	High Occupancy (10)	<0.05
04/26/2005	ES-029	1-1.5	High Occupancy (10)	9.1
04/26/2005	ES-091	1-1.5	High Occupancy (10)	7.2
04/26/2005	ES-095	1-1.5	High Occupancy (10)	6.5
04/26/2005	VB-PE-003B	11.5-12	High Occupancy (10)	0.058
04/26/2005	VB-PE-003C	12-12.5	High Occupancy (10)	0.52
04/26/2005	VB-PE-003D	12-12.5	High Occupancy (10)	0.56
04/26/2005	VB-PE-003E	13-13.5	High Occupancy (10)	0.33
04/26/2005	VB-PE-009	12-12.5	High Occupancy (10)	6.6
04/26/2005	VB-PE-010	12-12.5	High Occupancy (10)	<0.05
08/18/2005	VB-PE-001	10-10.5	High Occupancy (10)	0.063
08/18/2005	VB-PE-002	10-10.5	High Occupancy (10)	<0.05
08/18/2005	VB-PE-003A	11.5-12	High Occupancy (10)	0.089
08/18/2005	VB-PE-011	12-12.5	High Occupancy (10)	3.1
08/18/2005	VB-PE-012	12-12.5	High Occupancy (10)	0.43
09/02/2005	VB-PE-004	10-10.5	High Occupancy (10)	1.2
09/02/2005	VB-PE-005	10-10.5	High Occupancy (10)	<0.05
10/16/2007	SB-206	4-4.5	High Occupancy (10)	3.4
07/25/2008	VB-PE-006	10-10.5	High Occupancy (10)	<0.05
10/13/2008	B-047	0.5-1	High Occupancy (10)	<5D
10/13/2008	EG-056	2-2.5	High Occupancy (10)	5.18
10/13/2008	INFILL-001	2-2.5	High Occupancy (10)	6.95
10/13/2008	INFILL-001	4-4.5	High Occupancy (10)	6.38
10/13/2008	VB-PE-007	12-12.5	High Occupancy (10)	0.24
06/11/2009	AOC4B-001	3.5-4	High Occupancy (10)	0.64
06/11/2009	AOC4B-PE-001	4-4.5	High Occupancy (10)	6.2
06/11/2009	AOC4B-PE-002	4-4.5	High Occupancy (10)	7.8
06/11/2009	ES-022	1-1.5	High Occupancy (10)	8.7
06/11/2009	ES-028	1-1.5	High Occupancy (10)	7.3

QUALIFIERS: < = Indicates that the reported concentration is the Method Detection Limit (MDL). D = Compound identified at a secondary dilution factor.

Table 10: Analytical Results Summary for Sample Concentrations Greater than Applicable Regulatory Standard – Lot I; Subsection D

Sample Date	Sample ID	Sample Depth Range (fbg)	Proposed Development (Applicable Standard (mg/kg))	Total PCB Concentration (mg/kg)
09/01/2005	ES-023	1-1.5	High Occupancy (10)	19.5
10/04/2005	ES-090	1-1.5	High Occupancy (10)	45.7
10/04/2005	ES-092	1-1.5	High Occupancy (10)	30.5
05/29/2009	B-045	0.5-1	High Occupancy (10)	11
05/29/2009	ES-093	1-1.5	High Occupancy (10)	52.3
05/29/2009	ES-094	1-1.5	High Occupancy (10)	11.5
05/29/2009	ES-096	1-1.5	High Occupancy (10)	10.6
06/11/2009	INFILL-003	2-2.5	High Occupancy (10)	17.1
06/11/2009	INFILL-003	4-4.5	High Occupancy (10)	16
06/11/2009	INFILL-003	8-8.5	High Occupancy (10)	11.2

All of the ten (10) samples which are above the applicable regulatory standard, which are described in **Table 10**, will be remediated via the excavation of the soils and the collection of cleanup verification samples conducted in accordance with 40 CFR 761.61(a)(6). **Figure Series 8**, included in **Appendix A**, depicts the locations of these samples, the sample names and concentrations, the proposed excavation boundaries, and the proposed cleanup verification grid sampling. The details of the proposed excavation and remediation are presented in **Section 5**.

5.0 CLEANUP PLAN AND APPROACH

5.1 Cleanup Approach

5.1.1 Soil

All soils beneath the Lot I high occupancy (commercial) use area with total PCB concentrations above the high-occupancy restricted use standard of 10 ppm, and all soils in the low occupancy use area of Lot I with total PCB concentrations greater than 25 ppm will be excavated.

As approved by the EPA in the Cleanup Plan dated February 17, 2009 a designated portion of Lot II will receive a permanent TSCA impermeable cap, and will be called the Restricted Use area. In this report, REPSG proposes that some soils from the adjacent Lot I be placed into the Lot II Restricted Area. This is summarized in the **Table 15**, below:

Table 11: Proposed Remedial Action

Proposed Use	PCB Concentration	Remedial Action
High Occupancy	Total PCBs in Soil >25 ppm	Excavate and dispose off-Site to a permitted disposal facility.
High Occupancy	Total PCBs in Soil ≤25 and ppm >10 ppm	Excavated and placed into the Lot II Restricted Use area with a permanent, impermeable TSCA cap.
High Occupancy	Total PCBs in Soil ≤10 ppm	Remain *in-situ*.
Low Occupancy	Total PCBs in Soil >25 ppm	Excavate and dispose off-Site to a permitted disposal facility.
Low Occupancy	Total PCBs in Soil ≤25 ppm	Remain *in-situ*.

All soils that are to be disposed of off-Site will be sent to an accredited facility. The EPA will be notified in writing of the selected disposal facility prior to transport off-Site.

As presented in ***Section 4*** the Site has been subdivided into ten (10) sections for reporting purposes. The subsections (A-J) represent specific areas of Lot I as depicted in **Figure 4**. This Cleanup Plan presents the remediation approach for subsections A – D. These following sections present the proposed remediation for each subsection.

5.1.1.1 Subsection A

There are nineteen soil samples that have been collected in Subsection A that have total PCB concentrations greater than the applicable regulatory standard (see **Table 4**). These soil samples are located within two (2) areas that will be remediated via the excavation. **Table 16** lists the samples requiring excavation, the approximate dimensions and volume of the excavation, the proposed number of cleanup verification samples, and the plan for the remediated soils. Figures depicting the locations of these samples, the boundaries of these proposed remedial excavations, and the locations of the cleanup verification samples are presented in **Figure Series 5**.

Table 12: Excavation Description for Remediated Soils in Subsection A

Sample ID	Sample Depth (fbg)	Total PCB Concentration (mg/kg)	Excavation Dimensions (LxWxH in feet)	Volume (cubic yards)	Number of Proposed Cleanup Verification Samples (base and sidewall)	Plan for Excavated Soils
B-048	0.5-1	16.2	20x20x3.0	44.44	45	On-Site Consolidation
AOC2-PE-041	6-6.5	13.8	20x35x12.5 (oval shape)	325	67	Off-Site Disposal
EG-004	2-2.5	13				
EG-012	5-5.5	42.5				
EG-018	4-4.5	18.3				
EG-019	5-5.5	12.5				
EP-136	6-6.5	10.7				
EP-136	8-8.5	28.5				
EP-136	10-10.5	37.5				
EP-138	6-6.5	24				
EP-138	8-8.5	21.8				
EP-138	10-10.5	51.7				
EP-139	6-6.5	351				
EP-139	8-8.5	12.3				
EP-139	10-10.5	27				
EP-142	6-6.5	19.8				
EP-142	8-8.5	20.7				
EP-143	6-6.5	34.5				
EP-143	8-8.5	93.9				

The boundaries of these two (2) excavations are not completely delineated; however there currently exists eleven (11) soil samples that provide horizontal delineation of these proposed excavations. These soil samples have helped to guide the current extent of the proposed excavation. Proposed horizontal boundaries of a remedial excavation, that are not defined by existing delineation soil samples, are placed ten feet away from the closest soil sample requiring excavation; proposed vertical boundaries of a remedial excavation, that are not defined by existing delineation soil samples, are placed two feet below the deepest soil sample requiring excavation. The cleanup verification samples will confirm that all soils have been removed. The proposed cleanup verification sampling methodology is described in **Section 5.2**, the locations of the proposed cleanup verification samples are depicted in **Figure Series 5**.

5.1.1.1 Subsection A

There are nineteen soil samples that have been collected in Subsection A that have total PCB concentrations greater than the applicable regulatory standard (see **Table 4**). These soil samples are located within two (2) areas that will be remediated via the excavation. **Table 16** lists the samples requiring excavation, the approximate dimensions and volume of the excavation, the proposed number of cleanup verification samples, and the plan for the remediated soils. Figures depicting the locations of these samples, the boundaries of these proposed remedial excavations, and the locations of the cleanup verification samples are presented in **Figure Series 5**.

Table 12: Excavation Description for Remediated Soils in Subsection A

Sample ID	Sample Depth (fbg)	Total PCB Concentration (mg/kg)	Excavation Dimensions (LxWxH in feet)	Volume (cubic yards)	Number of Proposed Cleanup Verification Samples (base and sidewall)	Plan for Excavated Soils
B-048	0.5-1	16.2	20x20x3.0	44.44	45	On-Site Consolidation
AOC2-PE-041	6-6.5	13.8	20x35x12.5 (oval shape)	325	67	Off-Site Disposal
EG-004	2-2.5	13				
EG-012	5-5.5	42.5				
EG-018	4-4.5	18.3				
EG-019	5-5.5	12.5				
EP-136	6-6.5	10.7				
EP-136	8-8.5	28.5				
EP-136	10-10.5	37.5				
EP-138	6-6.5	24				
EP-138	8-8.5	21.8				
EP-138	10-10.5	51.7				
EP-139	6-6.5	351				
EP-139	8-8.5	12.3				
EP-139	10-10.5	27				
EP-142	6-6.5	19.8				
EP-142	8-8.5	20.7				
EP-143	6-6.5	34.5				
EP-143	8-8.5	93.9				

The boundaries of these two (2) excavations are not completely delineated; however there currently exists eleven (11) soil samples that provide horizontal delineation of these proposed excavations. These soil samples have helped to guide the current extent of the proposed excavation. Proposed horizontal boundaries of a remedial excavation, that are not defined by existing delineation soil samples, are placed ten feet away from the closest soil sample requiring excavation; proposed vertical boundaries of a remedial excavation, that are not defined by existing delineation soil samples, are placed two feet below the deepest soil sample requiring excavation. The cleanup verification samples will confirm that all soils have been removed. The proposed cleanup verification sampling methodology is described in **Section 5.2**, the locations of the proposed cleanup verification samples are depicted in **Figure Series 5**.

5.1.1.2 Subsection B

There are 143 soil samples that have been collected in Subsection B that have total PCB concentrations greater than the applicable regulatory standard (see **Table 6**). The excavations in this subsection are broken out into two groups of excavation. The excavation of shallow soils, from the surface down 15 fbg, will be excavated in a single large excavation that includes portions of Subsection C, and will require cleanup verification sampling to be conducted in accordance with 40 CFR 761.61(a)(6). **Table 17** lists the samples requiring excavation in this shallow profile, the approximate dimensions and volume of the excavation, the proposed number of cleanup verification samples, and the plan for the remediated soils. There are twelve (12) deep excavations in Subsection B, which are all below the shallow excavation, and are depicted separately in **Figure Series 6**. **Table 17** lists the samples requiring excavation, the approximate dimensions and volume of the excavation, the existing number of delineation samples, and the plan for the remediated soils. Figures depicting the locations of all these samples, the boundaries of these proposed remedial excavations, and the locations of the existing delineation samples are presented in **Figure Series 6**. Due to the high density of samples in this area, additional mapping is provided within this series that depicts the excavations in detail.

Table 13: Excavation Description for Remediated Soils in Subsection B – Shallow Profile (0-15fbg)

Sample ID	Sample Depth Range (fbg)	Total PCB Concentration (mg/kg)	Excavation Dimensions (LxWxH in feet)	Volume (cubic yards)	Number of Proposed Cleanup Verification Samples (base and sidewall)	Plan for Excavated Soils
AOC2-PE-026	13.6-14.1	5.8	40x36x15	800.42	63	Off-Site Disposal
AOC2-PE-031	15-15.5	14				
EP-261	13-13.5	<3.8				
EP-261	14-14.5	63.8				
EP-261	15-15.5	38.9				
EP-264	15-15.5	22.3				
EP-265	13-13.5	<3.4				
EP-265	14-14.5	<3.4				
EP-265	15-15.5	54				
EP-266	10-10.5	84.8				
EP-266	15-15.5	<3.5				
EP-267	13-13.5	6.2				
EP-267	14-14.5	29.3				
EP-267	15-15.5	57.4				
EP-268	15-15.5	<3.6				
EP-269	10-10.5	<3.4				
EP-269	15-15.5	<4.1				
EP-270	13-13.5	29.3				
EP-270	14-14.5	44				
EP-270	15-15.5	362				
EP-271	15-15.5	<3.5				
EP-272	10-10.5	22.2				
EP-272	15-15.5	<4.2				
EP-273	10-10.5	31.9				

5.1.1.2 Subsection B

There are 143 soil samples that have been collected in Subsection B that have total PCB concentrations greater than the applicable regulatory standard (see **Table 6**). The excavations in this subsection are broken out into two groups of excavation. The excavation of shallow soils, from the surface down 15 fbg, will be excavated in a single large excavation that includes portions of Subsection C, and will require cleanup verification sampling to be conducted in accordance with 40 CFR 761.61(a)(6). **Table 17** lists the samples requiring excavation in this shallow profile, the approximate dimensions and volume of the excavation, the proposed number of cleanup verification samples, and the plan for the remediated soils. There are twelve (12) deep excavations in Subsection B, which are all below the shallow excavation, and are depicted separately in **Figure Series 6**. These deep excavations will not require the collection of cleanup verification samples as these excavations have already been delineated. **Table 17** lists the samples requiring excavation, the approximate dimensions and volume of the excavation, the existing number of delineation samples, and the plan for the remediated soils. Figures depicting the locations of all these samples, the boundaries of these proposed remedial excavations, and the locations of the existing delineation samples are presented in **Figure Series 6**. Due to the high density of samples in this area and the agreed upon usage of the delineation samples as cleanup verification samples, additional mapping is provided within this series that depicts the excavations in detail.

Table 13: Excavation Description for Remediated Soils in Subsection B – Shallow Profile (0-15fbg)

Sample ID	Sample Depth Range (fbg)	Total PCB Concentration (mg/kg)	Excavation Dimensions (LxWxH in feet)	Volume (cubic yards)	Number of Proposed Cleanup Verification Samples (base and sidewall)	Plan for Excavated Soils
AOC2-PE-026	13.6-14.1	5.8	40x36x15	800.42	63	Off-Site Disposal
AOC2-PE-031	15-15.5	14				
EP-261	13-13.5	<3.8				
EP-261	14-14.5	63.8				
EP-261	15-15.5	38.9				
EP-264	15-15.5	22.3				
EP-265	13-13.5	<3.4				
EP-265	14-14.5	<3.4				
EP-265	15-15.5	54				
EP-266	10-10.5	84.8				
EP-266	15-15.5	<3.5				
EP-267	13-13.5	6.2				
EP-267	14-14.5	29.3				
EP-267	15-15.5	57.4				
EP-268	15-15.5	<3.6				
EP-269	10-10.5	<3.4				
EP-269	15-15.5	<4.1				
EP-270	13-13.5	29.3				
EP-270	14-14.5	44				
EP-270	15-15.5	362				
EP-271	15-15.5	<3.5				

EP-273	15-15.5	12.1				
EP-274	14-14.5	24.9				
EP-274	15-15.5	562				
EP-275	13-13.5	19				
EP-275	14-14.5	35.2				
EP-275	15-15.5	305				
EP-275	9-9.5	39.7				
EP-276	15-15.5	<3.7				
EP-277	15-15.5	<3.8				
EP-277	9-9.5	233				
EP-278	15-15.5	10.4				
EP-283	14-14.5	8.2				
EP-283	15-15.5	1020				
EP-283	9-9.5	9.1				
EP-284	13-13.5	95.7				
EP-284	14-14.5	52.1				
EP-284	15-15.5	40.1				
EP-285	13-13.5	84.8				
EP-285	14-14.5	89.6				
EP-285	15-15.5	34.6				
EG-015	3-3.5	8.44				
EG-016	5-5.5	7.39				
EG-023	9-9.5	7.17				
EG-024	2-2.5	5.96				
EG-030	12-12.5	4.41				
EG-031	9-9.5	84.1				
EG-032	12-12.5	20.9				
EG-033	5-5.5	56.1				
EG-040	10-10.5	25.2				
EG-041	13-13.5	<0.036				
EP-097	15-15.5	<0.034				
EP-1129	15-15.5	23.6				

The boundaries of these one shallow excavation is not completely delineated; however there currently exists several soil samples and neighboring excavations that help to define the extent of the excavation. Proposed horizontal boundaries of the shallow remedial excavation, that are not defined by existing delineation soil samples, are placed ten feet away from the closest soil sample requiring excavation; proposed vertical boundaries of a remedial excavation, that are not defined by existing delineation soil samples or adjacent remedial excavations, are placed two feet below the deepest soil sample requiring excavation. The cleanup verification samples from this shallow excavation will confirm that all soils have been removed. The proposed cleanup verification sampling methodology is described in **Section 5.2**, the locations of the proposed cleanup verification samples are depicted in **Figure Series 6**.

EP-272	10-10.5	22.2				
EP-272	15-15.5	<4.2				
EP-273	10-10.5	31.9				
EP-273	15-15.5	12.1				
EP-274	14-14.5	24.9				
EP-274	15-15.5	562				
EP-275	13-13.5	19				
EP-275	14-14.5	35.2				
EP-275	15-15.5	305				
EP-275	9-9.5	39.7				
EP-276	15-15.5	<3.7				
EP-277	15-15.5	<3.8				
EP-277	9-9.5	233				
EP-278	15-15.5	10.4				
EP-283	14-14.5	8.2				
EP-283	15-15.5	1020				
EP-283	9-9.5	9.1				
EP-284	13-13.5	95.7				
EP-284	14-14.5	52.1				
EP-284	15-15.5	40.1				
EP-285	13-13.5	84.8				
EP-285	14-14.5	89.6				
EP-285	15-15.5	34.6				
EG-015	3-3.5	8.44				
EG-016	5-5.5	7.39				
EG-023	9-9.5	7.17				
EG-024	2-2.5	5.96				
EG-030	12-12.5	4.41				
EG-031	9-9.5	84.1				
EG-032	12-12.5	20.9				
EG-033	5-5.5	56.1				
EG-040	10-10.5	25.2				
EG-041	13-13.5	<0.036				
EP-097	15-15.5	<0.034				
EP-1129	15-15.5	23.6				

The boundaries of these one shallow excavation is not completely delineated; however there currently exists several soil samples and neighboring excavations that help to define the extent of the excavation. Proposed horizontal boundaries of the shallow remedial excavation, that are not defined by existing delineation soil samples, are placed ten feet away from the closest soil sample requiring excavation; proposed vertical boundaries of a remedial excavation, that are not defined by existing delineation soil samples or adjacent remedial excavations, are placed two feet below the deepest soil sample requiring excavation. The cleanup verification samples from this shallow excavation will confirm that all soils have

been removed. The proposed cleanup verification sampling methodology is described in **Section 5.2**, the locations of the proposed cleanup verification samples are depicted in **Figure Series 6**.

Table 14: Excavation Description for Remediated Soils in Subsection B – Deep Profile (15+fbg)

Excavation ID	Sample ID	Sample Depth Range (fbg)	Total PCB Concentration (mg/kg)	Excavation Dimensions (LxWxH in feet)	Volume (cubic yards)	Existing Delineation Samples (base and sidewall)	Plan for Excavated Soils
Excavation 1	EP-224	16-16.5	<0.35	5x5x15-19fbg	3.85	3	Off-Site Disposal
	EP-225	16-16.5	<0.34				
	EP-226	16-16.5	32.1				
	EP-284	17-17.5	24.3				
	EP-284	18-18.5	12.2				
	EP-284	19-19.5	<3.6				
	EP-093	17-17.5	<0.034				
Excavation 2	ES-078	17.5-18	4.7	17x5x15-20fbg	15.74	10	Off-Site Disposal
	ES-079	17.5-18	50.8				
	ES-082	17.5-18	<4.3				
	HYD-001	17-17.5	<0.12				
	EP-223	16-16.5	<0.34				
	EP-279	16-16.5	43.6				
	EP-279	20-20.5	<3.8				
	EP-280	16-16.5	157				
	EP-280	20-20.5	<3.8				
	EP-285	17-17.5	35.7				
	EP-285	18-18.5	<3.5				
	EP-285	19-19.5	<3.6				
	EP-094	17-17.5	23.2				
	EP-1120	16-16.5	590				
	EP-1120	20-20.5	<3.6				
	EP-1121	16-16.5	142				
	EP-1121	20-20.5	473				
	EP-1126	16-16.5	64.6				
	EP-1126	20-20.5	<3.6				
	EP-1127	16-16.5	62.1				
	EP-1127	20-20.5	<3.7				
Excavation 3	ES-077	17.5-18	<3.3	9x5x15-19fbg	6.37	9	Off-Site Disposal
	HYD-001	17-17.5	<0.12				
	EP-232	17.5-18	<0.36				
	EP-233	17.5-18	<0.37				
	EP-234	17.5-18	<0.34				
	EP-235	17.5-18	23.6				
	EG-025	18-18.5	12.6				
	EP-1117	17.5-18	<1.7				
	EP-1118	16-16.5	<1.7				
	EP-1118	19-19.5	<1.8				
	EP-1119	16-16.5	<1.7				
	EP-1119	19-19.5	<1.8				
	EP-1180	16-16.5	18.6				
	EP-1180	19-19.5	<1.7				

Excavation ID	Sample ID	Sample Depth Range (fbg)	Total PCB Concentration (mg/kg)	Excavation Dimensions (LxWxH in feet)	Volume (cubic yards)	Existing Delineation Samples (base and sidewall)	Plan for Excavated Soils
Excavation 4	AOC2-PE-018	18-18.5	35	7x6x15-21fbg	9.61	9	Off-Site Disposal
	AOC2-PE-021	19-19.5	350				
	EP-228	15.5-16	598				
	EP-228	20.5-21	1.6				
	EP-229	15.5-16	<0.35				
	EP-229	20.5-21	<0.36				
	EP-230	15.5-16	<0.35				
	EP-230	20.5-21	<0.35				
	EP-231	15.5-16	<0.39				
	EP-231	20.5-21	<0.37				
	EP-098	21-21.5	2.42				
	EP-102	19-19.5	<0.034				
	EP-102	21-21.5	<0.039				
Excavation 5	AOC2-PE-013	20-20.5	<1.3	27x12x15-22fbg	83.43	30	Off-Site Disposal
	AOC2-PE-020	18-18.5	1.6				
	ES-076	17.5-18	<3.5				
	ES-076	22.5-23	21.5				
	ES-081	25-25.5	4.8				
	EP-208	17-17.5	302				
	EP-208	22-22.5	1.8				
	EP-209	17-17.5	364				
	EP-209	22-22.5	8.3				
	EP-209	27.5-28	<4.4				
	EP-212	16-16.5	22.5				
	EP-215	16-16.5	51.7				
	EP-215	21-21.5	180				
	EP-216	16-16.5	29.9				
	EP-216	21-21.5	0.63				
	EP-217	16-16.5	49.7				
	EP-217	21-21.5	1.6				
	EP-218	16-16.5	21.2				
	EP-218	21-21.5	3.7				
	EP-220	16-16.5	26.6				
	EP-220	21-21.5	5				
	EP-221	16-16.5	30.5				
	EP-221	21-21.5	5.5				
	EP-222	16-16.5	77.3				
	EP-222	21-21.5	<0.37				
	EP-227	16-16.5	36.4				
	EP-262	16-16.5	21				
	EP-262	20-20.5	5.5				
	EP-263	16-16.5	8.6				
	EP-263	21-21.5	<3.7				
	EP-265	22-22.5	<3.5				

	EP-266	22-22.5	<3.8				
	EP-272	21-21.5	<3.7				
	EP-273	21-21.5	<3.8				
	EP-276	22-22.5	<3.8				
	EP-085	22-22.5	<0.036				
	EP-085	23-23.5	<0.037				
	EP-086	22-22.5	<0.034				
	EP-086	23-23.5	<0.038				
	EP-089	21-21.5	1.06				
	EP-090	21-21.5	0.077				
	EP-091	21-21.5	<0.035				
	EP-092	19-19.5	4.29				
	EP-092	21-21.5	0.09				
	EP-097	17-17.5	<0.034				
	EP-099	19-19.5	<0.037				
	EP-099	21-21.5	<0.036				
	EP-100	19-19.5	<0.034				
	EP-100	21-21.5	<0.036				
	EP-1122	16-16.5	11				
	EP-1122	20-20.5	6.5				
	EP-1128	16-16.5	<3.6				
	EP-1128	20-20.5	<3.7				
	EP-1129	16-16.5	76.9				
	EP-1129	19-19.5	3790				
	EP-1129	20-20.5	595				
	EP-1129	21-21.5	<3.7				
Excavation 6	AOC2-PE-022	19-19.5	19.3	7x5x15-23fbg	10.58	3	Off-Site Disposal
	EP-219	16-16.5	59.2				
	EP-219	21-21.5	33.3				
	EP-261	16-16.5	28.2				
	EP-261	21-21.5	<3.5				
	EP-264	17-17.5	1090				
	EP-264	18-18.5	2260				
	EP-264	23-23.5	5				
	EP-088	21-21.5	21.6				
	EP-088	23-23.5	0.303				
Excavation 7	EP-282	16-16.5	30	3.25x3.25x15-23fbg	3.11	1	Off-Site Disposal
	EP-282	20-20.5	3580				
	EP-282	21-21.5	2040				
	EP-282	22-22.5	21.1				
	EP-282	23-23.5	9				

Excavation ID	Sample ID	Sample Depth Range (fbg)	Total PCB Concentration (mg/kg)	Excavation Dimensions (LxWxH in feet)	Volume (cubic yards)	Existing Delineation Samples (base and sidewall)	Plan for Excavated Soils
Excavation 8	EP-281	16-16.5	51.2	3.33x3.33x15-27fbg	5.04	1	Off-Site Disposal
	EP-281	20-20.5	3840				
	EP-281	21-21.5	1690				
	EP-281	22-22.5	1060				
	EP-281	23-23.5	14.6				
	EP-281	23-23.5	<3.6				
	EP-281	25-25.5	26.8				
	EP-281	27-27.5	<3.5				
Excavation 9	AOC2-PE-013	20-20.5	<1.3	7.5x5x15-23fbg	11.26	5	Off-Site Disposal
	ES-073	17.5-18	29.6				
	ES-073	22.5-23	266				
	ES-073	25-25.5	<3.7				
	ES-074	23-23.5	5.2				
	ES-083	17.5-18	5				
	ES-083	22.5-23	<3.6				
Excavation 10	ES-071	17.5-18	245	9x5x15-29fbg	22.81	4	Off-Site Disposal
	ES-071	22.5-23	2500				
	ES-071	25-25.5	<3.9				
	ES-072	17.5-18	397				
	ES-072	22.5-23	860				
	ES-072	25-25.5	<3.6				
	EG-015	17.5-18	116				
	EG-015	22.5-23	33.2				
	EG-015	23-23.5	<1.9				
	EP-1141	16-16.5	7.4				
	EP-1141	20-20.5	1040				
	EP-1141	23-23.5	33.4				
	EP-1141	25-25.5	958				
	EP-1141	27-27.5	39.5				
	EP-1141	29-29.5	<3.5				
Excavation 11	ES-071	17.5-18	245	18x15x15-25fbg	101.85	29	Off-Site Disposal
	ES-071	22.5-23	2500				
	ES-071	25-25.5	<3.9				
	ES-072	17.5-18	397				
	ES-072	22.5-23	860				
	ES-072	25-25.5	<3.6				
	ES-073	17.5-18	29.6				
	ES-073	22.5-23	266				
	ES-073	25-25.5	<3.7				
	ES-083	17.5-18	5				
	ES-083	22.5-23	<3.6				
	ES-152	17.5-18	<4.3				
	ES-152	23-23.5	<3.9				

	ES-153	17.5-18	123				
	ES-153	23-23.5	6.3				
	ES-154	17.5-18	<1.8				
	ES-154	23-23.5	<1.8				
	ES-155	17.5-18	16.9				
	ES-155	23-23.5	16.5				
	ES-155	25-25.5	<3.9				
	ES-156	17.5-18	<1.8				
	ES-156	23-23.5	<1.8				
	ES-157	17.5-18	<1.8				
	ES-157	23-23.5	<2				
	ES-158	17.5-18	<1.8				
	ES-158	23-23.5	<2				
	ES-159	17.5-18	20.3				
	ES-159	23-23.5	<1.8				
	ES-166	17.5-18	1340				
	ES-166	23-23.5	4.3				
	ES-167	17.5-18	<1.8				
	ES-167	23-23.5	4.4				
	ES-167	25-25.5	<1.9				
	ES-167	27-27.5	<1.9				
	ES-168	17.5-18	<1.9				
	ES-168	23-23.5	<1.9				
	ES-168	25-25.5	<1.8				
	ES-168	27-27.5	<2				
	ES-179	17.5-18	2280				
	ES-179	23-23.5	18.2				
	EG-015	17.5-18	116				
	EG-015	22.5-23	33.2				
	EG-015	23-23.5	<1.9				
	EG-022	16-16.5	3.51				
	EG-022	22.5-23	1100				
	EG-022	23-23.5	2880				
	EG-022	25-25.5	<3.7				
	EP-1123	16-16.5	9.5				
	EP-1123	20-20.5	299				
	EP-1123	23-23.5	11.4				
	EP-1123	25-25.5	<3.6				
	EP-1124	16-16.5	<3.8				
	EP-1124	20-20.5	2010				
	EP-1124	21-21.5	108				
	EP-1124	23-23.5	75.8				
	EP-1124	25-25.5	<3.6				
	EP-1125	16-16.5	45.4				
	EP-1125	20-20.5	300				
	EP-1125	23-23.5	56.4				

	EP-084	22-22.5	<0.037				
	EP-084	23-23.5	<0.04				
	EP-084	27.5-28	<3.8				
	EP-087	22-22.5	57.9				
	EP-087	23-23.5	99.2				
	EP-103	17.5-18	346				
	EP-103	22-22.5	<0.037				
	EP-104	22-22.5	0.029				

The boundaries of these twelve (12) deep remedial excavations are fully delineated by existing delineation samples and/or neighboring excavations. Figures depicting the locations of all these excavations, the samples which will be excavated, and the existing delineation samples are presented in **Figure Series 6.**

5.1.1.3 Subsection C

There are 69 soil samples that have been collected in Subsection C that have total PCB concentrations greater than the applicable regulatory standard (see **Table 6**). The excavations in this subsection are rather complicated, and are broken out into two groups of excavation. The excavation of shallow soils, from the surface down 15 fbg, will be excavated in a several excavations, including a large excavation that includes portions of Subsection C. These shallow excavations will require cleanup verification sampling be conducted in accordance with 40 CFR 761.61(a)(6). **Table 17** lists the samples requiring excavation in this shallow profile, the approximate dimensions and volume of the excavation, the proposed number of cleanup verification samples, and the plan for the remediated soils. There are four (4) deep excavations in Subsection C, which are all below the shallow excavation, and are depicted separately in **Figure Series 7**. **Table 17** lists the samples requiring excavation, the approximate dimensions and volume of the excavation, the number of delineation samples, and the plan for the remediated soils. Figures depicting the locations of all these samples, the boundaries of these proposed remedial excavations, and the locations of the existing delineation samples are presented in **Figure Series 7**. Due to the high density of samples in this area, additional mapping is provided within this series that depicts the excavations in detail.

	EP-1125	25-25.5	<3.9				
	EP-1125	27-27.5	<3.8				
Excavation 12	AOC2-PE-051	22-22.5	3200	15x10x15-27fbg	68.00	20	Off-Site Disposal
	ES-075	23-23.5	31				
	ES-075	25-25.5	8.3				
	ES-075	27-27.5	<3.5				
	ES-075	29-29.5	<3.7				
	ES-178	17.5-18	<2.5				
	ES-178	23-23.5	2680				
	ES-178	25-25.5	4030				
	ES-178	27-27.5	<4.1				
	ES-180	17.5-18	23.1				
	ES-180	22-22.5	5140				
	EP-205	17-17.5	308				
	EP-205	22-22.5	25.7				
	EP-206	17-17.5	7.7				
	EP-206	22-22.5	1.4				
	EP-206	27.5-28	<3.9				
	EP-207	17-17.5	228				
	EP-207	22-22.5	12.6				
	EP-210	17-17.5	3				
	EP-210	22-22.5	3220				
	EP-211	16-16.5	7.9				
	EP-213	16-16.5	<0.4				
	EP-214	16-16.5	1270				
	EP-267	22-22.5	<4.1				
	EP-267	27.5-28	<3.7				
	EP-268	18-18.5	<3.3				
	EP-268	27.5-28	<4.2				
	EP-270	24-24.5	2210				
	EP-270	25-25.5	2780				
	EP-270	26-26.5	29.9				
	EP-270	27-27.5	7.3				
	EP-271	22-22.5	10.1				
	EP-271	23-23.5	25.4				
	EP-271	24-24.5	93				
	EP-271	25-25.5	6720				
	EP-271	27-27.5	<3.8				
	EP-274	23-23.5	2190				
	EP-274	24-24.5	301				
	EP-274	25-25.5	26.7				
	EP-274	27-27.5	<3.7				
	EG-039	16-16.5	119				
	EP-083	23-23.5	<0.038				

	EP-084	22-22.5	<0.037				
	EP-084	23-23.5	<0.04				
	EP-084	27.5-28	<3.8				
	EP-087	22-22.5	57.9				
	EP-087	23-23.5	99.2				
	EP-103	17.5-18	346				
	EP-103	22-22.5	<0.037				
	EP-104	22-22.5	0.029				

The boundaries of these twelve (12) deep remedial excavations are fully delineated by existing delineation samples and/or neighboring excavations. Figures depicting the locations of all these excavations, the samples which will be excavated, and the existing delineation samples are presented in **Figure Series 6**.

5.1.1.3 Subsection C

There are 69 soil samples that have been collected in Subsection C that have total PCB concentrations greater than the applicable regulatory standard (see **Table 6**). The excavations in this subsection are rather complicated, and are broken out into two groups of excavation. The excavation of shallow soils, from the surface down 15 fbg, will be excavated in a several excavations, including a large excavation that includes portions of Subsection C. These shallow excavations will require cleanup verification sampling be conducted in accordance with 40 CFR 761.61(a)(6). **Table 17** lists the samples requiring excavation in this shallow profile, the approximate dimensions and volume of the excavation, the proposed number of cleanup verification samples, and the plan for the remediated soils. There are four (4) deep excavations in Subsection C, which are all below the shallow excavation, and are depicted separately in **Figure Series 7**. These deep excavations will not require the collection of cleanup verification samples as these excavations have already been delineated. **Table 17** lists the samples requiring excavation, the approximate dimensions and volume of the excavation, the number of delineation samples, and the plan for the remediated soils. Figures depicting the locations of all these samples, the boundaries of these proposed remedial excavations, and the locations of the existing delineation samples are presented in **Figure Series 7**. Due to the high density of samples in this area and the agreed upon usage of the delineation samples as cleanup verification samples, additional mapping is provided within this series that depicts the excavations in detail.

Table 15: Excavation Description for Remediated Soils in Subsection C – Shallow Profile (0-15fbg)

Sample ID	Sample Depth Range (fbg)	Total PCB Concentration (mg/kg)	Excavation Dimensions (LxWxH in feet)	Volume (cubic yards)	Number of Proposed Cleanup Verification Samples (base and sidewall)	Plan for Excavated Soils
AOC2-PE-030	8.5-9	16	40x44.75x15	997.08	147	Off-site Disposal
EG-034	2-2.5	72.8				
EG-035	10-10.5	<0.037				
EG-042	1-1.5	44.6				
EG-043	12-12.5	<0.037				
EG-044	12-12.5	<0.034				
EG-046	6-6.5	14.7				
EG-048	8-8.5	27.5				
EG-049	15-15.5	0.893				
EG-051	13-13.5	16.6				
EG-052	4-4.5	29.6				
EG-053	8-8.5	12.3				
EG-054	4-4.5	22.8				
EG-055	1-1.5	48.2				
EP-108	10-10.5	<0.038				
EP-109	10-10.5	0.029				
EP-109	8.5-9	37.6				
EP-110	10-10.5	0.222				
EP-110	8.5-9	0.465				
EP-111	10-10.5	3.02				
EP-111	8.5-9	2.25				
EP-112	10-10.5	30.9				
EP-112	12-12.5	<0.036				
EP-112	8.5-9	0.116				
EP-113	10-10.5	5.93				
EP-113	8.5-9	2.4				
EP-116	10-10.5	<0.037				
EP-116	8.5-9	<0.037				
ES-085	1-1.5	71.5	20x20x3.5	51.85	37	Off-site Disposal
TP-012	4-4.5	ND				
AOC2-026	12-12.5	<0.05	20x58x3.5	150.37	99	Off-site Disposal
AOC2-026	6-6.5	<0.05				
ES-086	1-1.5	145				
ES-087	1-1.5	142				
ES-088	1-1.5	261				
ES-089	1-1.5	62.9	20x20x3.5	51.85	37	Off-site Disposal
AOC2-PE-058	12-12.5	110	12x15x14	93.85	38	Off-site Disposal
AOC2-PE-059	12-12.5	0.79				
AOC2-PE-060	12-12.5	<0.039				
EP-144	14-14.5	5.94				
EP-144	2-2.5	3.45				
EP-144	4-4.5	0.761				
EP-144	6-6.5	24.1				
EP-144	8-8.5	2.58				
EP-145	12-12.5	0.993				
EP-145	14-14.5	2.36				
EP-146	12-12.5	2.2				

EP-146	14-14.5	1.03				
EP-147	12-12.5	0.659				
EP-147	14-14.5	<0.036				
EP-148	12-12.5	5.99				
EP-148	14-14.5	4.04				
EP-150	2-2.5	5.37				
EP-150	4-4.5	39.5				
EP-150	6-6.5	9.21				
EP-150	8-8.5	<0.037				
EP-151	2-2.5	225				
EP-151	4-4.5	57.5				
EP-151	6-6.5	0.149				
EP-151	8-8.5	<0.036				
EP-153	2-2.5	6.98				
EP-153	4-4.5	3.36				
EP-153	6-6.5	<0.036				
EP-153	8-8.5	<0.035				
EP-154	2-2.5	12.1				
EP-154	4-4.5	4.74				
EP-154	6-6.5	45				
EP-154	8-8.5	15				
EG-029	3-3.5	1.59				
EG-036	11-11.5	<0.037				
EG-037	2-2.5	23				
EG-037	4-4.5	14.6				
EG-037	6-6.5	579				
EG-037	8-8.5	73.8				
EG-038	1-1.5	17.3				

The boundaries of these five (5) excavations are not completely delineated; however there currently exists eight (8) soil samples that provide horizontal and vertical delineation of these proposed excavations. These soil samples have helped to guide the current extent of the proposed excavation. Proposed horizontal boundaries of a remedial excavation, that are not defined by existing delineation soil samples, are placed ten feet away from the closest soil sample requiring excavation; proposed vertical boundaries of a remedial excavation, that are not defined by existing delineation soil samples, are placed two feet below the deepest soil sample requiring excavation. The cleanup verification samples will confirm that all soils have been removed. The proposed cleanup verification sampling methodology is described in **Section 5.2**, the locations of the proposed cleanup verification samples are depicted in **Figure Series 7**.

Table 16: Excavation Description for Remediated Soils in Subsection C – Deep Profile (15+fbg)

Excavation ID	Sample ID	Sample Depth Range (fbg)	Total PCB Concentration (mg/kg)	Excavation Dimensions (LxWxH in feet)	Volume (cubic yards)	Existing Delineation Samples (base and sidewall)	Plan for Excavated Soils
Excavation 13	AOC2-PE-052	18-18.5	0.23	8x5x15-20fbg	7.41	5	Off-Site Disposal
	EP-236	16.5-17	469				
	EP-237	16.5-17	1.2				
	EP-238	16.5-17	1.1				

	EP-239	16.5-17	682				
	EP-257	18-18.5	<3.5				
	EP-258	16-16.5	22				
	EP-258	18-18.5	45.9				
	EP-258	19-19.5	945				
	EP-258	20-20.5	8.4				
	EG-050	17-17.5	153				
Excavation 14	ES-151	16.5-17	1670	6.75X8X15-25fbg	20.33	14	Off-Site Disposal
	ES-151	20-20.5	1140				
	ES-151	22-22.5	899				
	ES-151	25-25.5	<1.9				
	ES-162	16.5-17	357				
	ES-162	22-22.5	23.7				
	ES-171	17.5-18	<2				
	ES-171	20-20.5	83.3				
	ES-181	17.5-18	<4.1				
	ES-181	23-23.5	<3.6				
	AOC2-PE-032	19-19.5	0.12				
	AOC2-PE-052	18-18.5	0.23				
	ES-080	20-20.5	2890				
	ES-080	23-23.5	1980				
	ES-080	25-25.5	<1.9				
	ES-084	17.5-18	6570				
	ES-160	16.5-17	2200				
	ES-160	22-22.5	438				
	ES-160	23-23.5	91.8				
	ES-160	25-25.5	<2U				
	ES-164	16.5-17	663				
	ES-164	23-23.5	<2				
	ES-169	17.5-18	<2.6				
	ES-169	23-23.5	<2				
	ES-170	17.5-18	<1.9				
	ES-170	23-23.5	<1.9				
	ES-080	17.5-18	638				
	ES-080	19-19.5	3630				
	EP-256	18-18.5	2480				
	EP-259	18-18.5	13700				
	EP-106	22-22.5	0.949				
Excavation 15	ES-162	16.5-17	357	3.5x15x15-27fbg	23.33	14	Off-Site Disposal
	ES-162	22-22.5	23.7				
	ES-163	16.5-17	1250				
	ES-163	23-23.5	5290				
	ES-163	25-25.5	36.5				
	ES-163	27-27.5	<4.2				
	ES-163	29-29.5	<1.8				
	ES-171	17.5-18	<2				
	ES-171	20-20.5	83.3				
	ES-172	17.5-18	<2.1				
	ES-172	23-23.5	9.6				
	ES-172	27-27.5	<1.8				
	ES-173	17.5-18	<2				
	ES-173	23-23.5	<1.8				

INFILL-003	2-2.5	17.1	20x20x12	177.78	80	On-Site Consolidation
INFILL-003	4-4.5	16				
INFILL-003	8-8.5	11.2				

The boundaries of these five (5) excavations are not completely delineated; however there currently exists five (5) soil samples that provide vertical and horizontal delineation for one of these proposed excavations. These soil samples have helped to guide the current extent of the proposed excavation. Proposed horizontal boundaries of a remedial excavation, that are not defined by existing delineation soil samples, are placed ten feet away from the closest soil sample requiring excavation; proposed vertical boundaries of a remedial excavation, that are not defined by existing delineation soil samples, are placed two feet below the deepest soil sample requiring excavation. The cleanup verification samples will confirm that all soils have been removed. The proposed cleanup verification sampling methodology is described in **Section 5.2**, the locations of the proposed cleanup verification samples are depicted in **Figure Series 8**.

5.1.2 Subsurface Debris

In areas where PCB impacted soils are disposed of off-Site (greater than 25 ppm), subsurface debris will be disposed of with the soil if practical. Unless analyzed for total PCB concentrations the assumed total PCB concentrations for subsurface debris will be equal to the total PCB concentrations of the surrounding soils. Debris will be managed in the same way as soils, debris determined to not be structurally suitable will be disposed off-Site.

5.1.3 Dewatering of Excavations

Water removed from any excavation will be handled and disposed of in accordance with 761.61(b)(1) and 761.61(a)(5)(i)(B)(1). Disposal methods of water will be at the discretion of the general contractor and will either be completed via:

1. Discharge to the sanitary sewer (which discharges to a publicly owned treatment works) following treatment. Treatment will consist at a minimum of a sedimentation tank, bag filter, and carbon. Effluent samples will be collected to ensure the effluent does not exceed the discharge limit of 3 ug/L specified in 761.79(b)(1)(ii). All discharge of water will also be in accordance with the waste water treatment permit obtained from the City of Philadelphia for the Former Schmidt's Brewery Site.

2. Direct disposal at a licensed wastewater treatment facility in accordance with all Federal, State and local requirements.

5.1.4 Health and Safety

A Health and Safety plan specifically addressing remediation activities is included in **Appendix F**.

5.2 Cleanup Verification Sampling

The proposed locations of the cleanup verification, samples which are to be collected to confirm the removal of all soil with total PCB concentrations greater than the applicable standard have been

	ES-173	27-27.5	<2				
	ES-174	17.5-18	<3.6				
	ES-174	23-23.5	36.3				
	ES-174	27-27.5	<3.7				
	ES-181	17.5-18	<4.1				
	ES-181	23-23.5	<3.6				
Excavation 16	ES-161	16.5-17	25.5	7x7.5x15-29fbg	27.22	10	Off-Site Disposal
	ES-161	22-22.5	537				
	ES-161	23-23.5	24.7				
	ES-161	25-25.5	52.7				
	ES-161	27-27.5	39.7				
	ES-161	29-29.5	43.6				
	ES-165	16.5-17	5260				
	ES-165	23-23.5	52.6				
	ES-165	27-27.5	34.3				
	ES-165	29-29.5	52				
	ES-176	17.5-18	1250				
	ES-176	23-23.5	<3.8				
	ES-176	27-27.5	<3.8				
	ES-177	17.5-18	1350				
	ES-177	23-23.5	<3.7				
	ES-177	27-27.5	<3.8				
	ES-175	17.5-18	2150				
	ES-175	23-23.5	4.3				
	ES-175	27-27.5	<4.1				

5.1.1.4 Subsection D

There are ten (10) soil samples that have been collected in Subsection D that have total PCB concentrations greater than the applicable regulatory standard (see **Table 10**). These soil samples are located within five (5) areas that will be remediated via the excavation. **Table 19** lists the samples requiring excavation, the approximate dimensions and volume of the excavation, the proposed number of cleanup verification samples, and the plan for the remediated soils. Figures depicting the locations of these samples, the boundaries of these proposed remedial excavations, and the locations of the cleanup verification samples are presented in **Figure Series 8**.

Table 17: Excavation Description for Remediated Soils in Subsection D

Sample ID	Sample Depth (fbg)	Total PCB Concentration (mg/kg)	Excavation Dimensions (LxWxH in feet)	Volume (cubic yards)	Number of Proposed Cleanup Verification Samples (base and sidewall)	Plan for Excavated Soils
ES-023	1-1.5	19.5	20x20x3.5	51.85	45	On-Site Consolidation
ES-090	1-1.5	45.7	20x20x3.5	51.85	45	Off-Site Disposal
ES-092	1-1.5	30.5	40x20x3.5	103.7	67	Off-Site Disposal
ES-093	1-1.5	52.3				
ES-094	1-1.5	11.5	40x40x3.5 (T-shape)	207.41	106	On-Site Consolidation
ES-096	1-1.5	10.6				
B-045	0.5-1	11				

determined using a five-foot grid, as required by 40 CFR 761.61(a)(6), and will be collected and analyzed for total PCBs via EPA Method 8082. Cleanup verification samples will be collected at the base of the excavations and along the sidewalls. Cleanup verification samples will be collected on a five-foot interval grid horizontally across the bottom, horizontally along the sidewalls, and vertically at depth profiles along the sidewalls. All excavations will have a minimum of three (3) cleanup verification samples collected in accordance Subpart O of the above referenced regulations. These cleanup verification samples may be composited in accordance with 40 CFR 761.289. At locations along the sidewalls of excavations deeper than fifteen (15) feet below grade (fbg) where existing delineation samples are present a cleanup verification sample will not be collected (these locations are depicted in maps included in **Figure Series 5 - 10**). All cleanup verification samples will be collected in accordance with the sampling protocol described in **Section 3.3** of this plan.

For cleanup verification samples collected at the base or sidewall of the excavation that have total PCB concentrations in exceedance of the applicable standard, the excavation will be extended and the new boundaries of the excavation will be sampled in accordance with 40 CFR 761.61(a)(6). Cleanup verification samples collected at the base of the excavation that require remediation will be remediated via the expansion of the excavation bottom an additional one (1) foot in depth, after which new cleanup verification samples will be collected and the process repeated. If the cleanup verification samples that are in exceedance of the applicable standard are located on the sidewall of the excavation, the excavation will be extended an additional one (1) foot in the direction of the sampling grid, after which new cleanup verification samples at the same depth will be collected and the process repeated. The excavation will continue in this step-wise fashion until all soil samples with total PCB concentrations above the applicable standard are removed, and proved by the analytical results for the existing, *in-situ*, cleanup verification samples.

5.3 Cap Design

The entire area of the Site that is covered in this plan will receive a TSCA cap. Soils beneath the proposed high occupancy areas will have total PCB concentrations less than or equal to 10 ppm, and soils in low occupancy areas will have total PCB concentrations less than or equal to 25 ppm. An impermeable cap constructed in accordance with the regulations described in § 761.61(a)(7) will be constructed across the entire area covered in this plan. Appropriate deed restrictions addressing the PCB containing soils that are to remain on-Site will be included in property's deed. Additional descriptions of the proposed cap design and implementation are provided in the Controls Maintenance and Monitoring Plan included in **Appendix G.**

Other soils with total PCB concentrations greater than 10 ppm and less than or equal to 25 ppm that require excavation will be excavated and consolidated on Lot 11 in the low occupancy Restricted Use area. This consolidation approach is more protective of human health and the environment than capping the PCB impacted soil in place because it reduces the required size of the TSCA cap, which means that there is less cap material to be maintained, and there are fewer utility corridors running through the area of soils requiring a TSCA soil cap. The capped area on Lot 11 is referred to as the Restricted Use Area.

INFILL-003	2-2.5	17.1	20x20x12	177.78	80	On-Site Consolidation
INFILL-003	4-4.5	16				
INFILL-003	8-8.5	11.2				

The boundaries of these five (5) excavations are not completely delineated; however there currently exists five (5) soil samples that provide vertical and horizontal delineation for one of these proposed excavations. These soil samples have helped to guide the current extent of the proposed excavation. Proposed horizontal boundaries of a remedial excavation, that are not defined by existing delineation soil samples, are placed ten feet away from the closest soil sample requiring excavation; proposed vertical boundaries of a remedial excavation, that are not defined by existing delineation soil samples, are placed two feet below the deepest soil sample requiring excavation. The cleanup verification samples will confirm that all soils have been removed. The proposed cleanup verification sampling methodology is described in **Section 5.2**, the locations of the proposed cleanup verification samples are depicted in **Figure Series 8**.

5.1.2 Subsurface Debris

In areas where PCB impacted soils are disposed of off-Site (greater than 25 ppm), subsurface debris will be disposed of with the soil if practical. Unless analyzed for total PCB concentrations the assumed total PCB concentrations for subsurface debris will be equal to the total PCB concentrations of the surrounding soils. Debris will be managed in the same way as soils, debris determined to not be structurally suitable will be disposed off-Site.

5.1.3 Health and Safety

A Health and Safety plan specifically addressing remediation activities is included in **Appendix F**.

5.2 Cleanup Verification Sampling

The proposed locations of the cleanup verification, samples which are to be collected to confirm the removal of all soil with total PCB concentrations greater than the applicable standard have been determined using a five-foot grid, as required by 40 CFR 761.61(a)(6), and will be collected and analyzed for total PCBs via EPA Method 8082. Cleanup verification samples will be collected at the base of the excavations and along the sidewalls. Cleanup verification samples will be collected on a five-foot interval grid horizontally across the bottom, horizontally along the sidewalls, and vertically at depth profiles along the sidewalls. At locations where existing delineation samples are present a cleanup verification sample will not be collected (these locations are depicted in maps included in **Figure Series 5 - 10**). All cleanup verification samples will be collected in accordance with the sampling protocol described in **Section 3.2** of this plan.

For cleanup verification samples collected at the base or sidewall of the excavation that have total PCB concentrations in exceedance of the applicable standard, the excavation will be extended and the new boundaries of the excavation will be sampled in accordance with 40 CFR 761.61(a)(6). Cleanup verification samples collected at the base of the excavation that require remediation will be remediated

This Restricted use area will have an impermeable cap constructed in accordance with the regulations described in § 761.61(a)(7). The location of this cap is depicted in **Figure 11**. The construction of this cap was approved by the EPA on February 27, 2009 as part of the approval of the Lot II and Lot III Cleanup Plan. Appropriate deed restrictions addressing the PCB containing soils that are to remain on-Site will be included in property's deed. Additional descriptions of the proposed cap design and implementation are provided in the Controls Maintenance and Monitoring Plan which was included as part of the prior Self Implementing Cleanup Plan for the First Phase (Lot II and Lot III) of the development.

5.3.1 Utility Corridors

Utility lines that may be accessed for on-going operations that are placed within Site soils will require the import of clean fill material to be placed in the areas immediately around the utility corridors, for the protection of human health to future Site workers that may access these utility lines. Lines that are not installed within conduits, storm sewer, sanitary sewer, or water, will have a 2-foot radius of clean fill imported all around the utility line. Outside of this clean fill, between the clean fill material and the in-situ Site soils, a visual barrier, a fabric marker, will be installed to serve as a warning to Site construction workers who may come in contact with these PCB impacted soils in the future. The clean corridor profile is included in **Appendix E**.

5.4 Recordkeeping Requirements

Recordkeeping for the cleanup will comply with the requirements set forth in 761.61(a)(9) and 761.125(c)(5). Recordkeeping will be sufficient to document the cleanup with records of decontamination. Records will be maintained for a 5 year period. The records will contain the following information:

1. The date and time of cleanup activities and the daily log of Site work.
2. A description of the surfaces cleaned (if applicable) and the areas excavated each day to include the depth of excavations and the amount of soil removed.
3. Post cleanup verification data along with cleanup verification sampling methodology and analytical methods used.
4. Decision process and subsequent additional excavation and follow-up sampling where initial cleanup verification samples exceed cleanup goals.

6.0 SCHEDULE

The PCB remediation will be conducted in multiple phases. Notifications will be provided as required. The Second Phase of remediation, which is the only phase that this Cleanup Plan is intended to address, is anticipated to begin within one day of approval of this Cleanup Plan. The remediation is anticipated to take 6 weeks.

via the expansion of the excavation bottom an additional one (1) foot in depth, after which new cleanup verification samples will be collected and the process repeated. If the cleanup verification samples that are in exceedance of the applicable standard are located on the sidewall of the excavation, the excavation will be extended an additional one (1) foot in the direction of the sampling grid, after which new cleanup verification samples at the same depth will be collected and the process repeated. The excavation will continue in this step-wise fashion until all soil samples with total PCB concentrations above the applicable standard are removed, and proved by the analytical results for the existing, *in-situ*, cleanup verification samples.

5.3 Cap Design

The entire area of the Site that is covered in this plan will receive a TSCA cap. Soils beneath the proposed high occupancy areas will have total PCB concentrations less than or equal to 10 ppm, and soils in low occupancy areas will have total PCB concentrations less than or equal to 25 ppm. An impermeable cap constructed in accordance with the regulations described in § 761.61(a)(7) will be constructed across the entire area covered in this plan. Appropriate deed restrictions addressing the PCB containing soils that are to remain on-Site will be included in property's deed. Additional descriptions of the proposed cap design and implementation are provided in the Controls Maintenance and Monitoring Plan included in **Appendix G**.

Other soils with total PCB concentrations greater than 10 ppm and less than or equal to 25 ppm that require excavation will be excavated and consolidated on Lot II in the low occupancy Restricted Use area. This consolidation approach is more protective of human health and the environment than capping the PCB impacted soil in place because it reduces the required size of the TSCA cap, which means that there is less cap material to be maintained, and there are fewer utility corridors running through the area of soils requiring a TSCA soil cap. The capped area on Lot II is referred to as the Restricted Use Area.

This Restricted use area will have an impermeable cap constructed in accordance with the regulations described in § 761.61(a)(7). The location of this cap is depicted in **Figure 11**. The construction of this cap was approved by the EPA on February 27, 2009 as part of the approval of the Lot II and Lot III Cleanup Plan. Appropriate deed restrictions addressing the PCB containing soils that are to remain on-Site will be included in property's deed. Additional descriptions of the proposed cap design and implementation are provided in the Controls Maintenance and Monitoring Plan which was included as part of the prior Self Implementing Cleanup Plan for the First Phase (Lot II and Lot III) of the development.

5.3.1 Utility Corridors

Utility lines that may be accessed for on-going operations that are placed within Site soils will require the import of clean fill material to be placed in the areas immediately around the utility corridors, for the protection of human health to future Site workers that may access these utility lines. Lines that are not installed within conduits, storm sewer, sanitary sewer, or water, will have a 2-foot radius of clean fill imported all around the utility line. Outside of this clean fill, between the clean fill material and the in-situ Site soils, a visual barrier, a fabric marker, will be installed to serve as a warning to Site construction

workers who may come in contact with these PCB impacted soils in the future. The clean corridor profile is included in **Appendix E**.

5.4 Recordkeeping Requirements

Recordkeeping for the cleanup will comply with the requirements set forth in 761.61(a)(9) and 761.125(c)(5). Recordkeeping will be sufficient to document the cleanup with records of decontamination. Records will be maintained for a 5 year period. The records will contain the following information:

1. The date and time of cleanup activities and the daily log of Site work.
2. A description of the surfaces cleaned (if applicable) and the areas excavated each day to include the depth of excavations and the amount of soil removed.
3. Post cleanup verification data along with cleanup verification sampling methodology and analytical methods used.
4. Decision process and subsequent additional excavation and follow-up sampling where initial cleanup verification samples exceed cleanup goals.

6.0 SCHEDULE

The PCB remediation will be conducted in multiple phases. Notifications will be provided as required. The Second Phase of remediation, which is the only phase that this Cleanup Plan is intended to address, is anticipated to begin within one day of approval of this Cleanup Plan. The remediation is anticipated to take 6 weeks.

7.0 CERTIFICATION

All sampling plans, sample collection procedures, sample preparation procedures, extraction procedures, and instrumental/chemical analysis procedures used to assess or characterize the PCB contamination at the Former Schmidt's Brewery Site are on file at Northern Liberties Development, LP offices in Philadelphia, PA and are available for EPA inspection.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified sections(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete. Northern Liberties Development, LP

Adam Lisausky, VP

10/9/09

Date

10/9/09

Date

7.0 CERTIFICATION

All sampling plans, sample collection procedures, sample preparation procedures, extraction procedures, and instrumental/chemical analysis procedures used to assess or characterize the PCB contamination at the Former Schmidt's Brewery Site are on file at Northern Liberties Development, LP offices in Philadelphia, PA and are available for EPA inspection.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified sections(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.

Northern Liberties Development, LP
By: Northern Liberties Development Center, Inc.

Adam Lisausky, VP

9/24/09

Date

9/25/09

Date